DECLARATION OF

DENNIS W. CARLTON

and

HAL S. SIDER

In connection with the proposed transaction, SBC intends to file a registration statement, including a proxy statement of AT&T Corp., and other materials with the Securities and Exchange Commission (the "SEC"). Investors are urged to read the registration statement and other materials when they are available because they contain important information. Investors will be able to obtain free copies of the registration statement and proxy statement, when they become available, as well as other filings containing information about SBC and AT&T Corp., without charge, at the SEC's Internet site (www.sec.gov). These documents may also be obtained for free from SBC's Investor Relations web site (www.sbc.com/investor_relations) or by directing a request to SBC Communications Inc., Stockholder Services, 175 E. Houston, San Antonio, Texas 78258. Free copies of AT&T Corp.'s filings may be accessed and downloaded for free at the AT&T Relations Web Site (www.att.com/ir/sec) or by directing a request to AT&T Corp., Investor Relations, One AT&T Way, Bedminster, New Jersey 07921.

SBC, AT&T Corp. and their respective directors and executive officers and other members of management and employees may be deemed to be participants in the solicitation of proxies from AT&T shareholders in respect of the proposed transaction. Information regarding SBC's directors and executive officers is available in SBC's proxy statement for its 2004 annual meeting of stockholders, dated March 11, 2004, and information regarding AT&T Corp.'s directors and executive officers is available in AT&T Corp.'s proxy statement for its 2004 annual meeting of shareholders, dated March 25, 2004. Additional information regarding the interests of such potential participants will be included in the registration and proxy statement and the other relevant documents filed with the SEC when they become available.

Certain matters discussed in this statement, including the appendices attached, are forward-looking statements that involve risks and uncertainties. Forward-looking statements include, without limitation, the information concerning possible or assumed

future revenues and results of operations of SBC and AT&T, projected benefits of the proposed SBC/AT&T merger and possible or assumed developments in the telecommunications industry. Readers are cautioned that the following important factors, in addition to those discussed in this statement and elsewhere in the proxy statement/prospectus to be filed by SBC with the Securities and Exchange Commission, and in the documents incorporated by reference in such proxy statement/prospectus, could affect the future results of SBC and AT&T or the prospects for the merger: (1) the ability to obtain governmental approvals of the merger on the proposed terms and schedule; (2) the failure of AT&T shareholders to approve the merger; (3) the risks that the businesses of SBC and AT&T will not be integrated successfully; (4) the risks that the cost savings and any other synergies from the merger may not be fully realized or may take longer to realize than expected; (5) disruption from the merger making it more difficult to maintain relationships with customers, employees or suppliers; (6) competition and its effect on pricing, costs, spending, third-party relationships and revenues; (7) the risk that Cingular Wireless LLC could fail to achieve, in the amount and within the timeframe expected, the synergies and other benefits expected from its acquisition of AT&T Wireless; (8) final outcomes of various state and federal regulatory proceedings and changes in existing state, federal or foreign laws and regulations and/or enactment of additional regulatory laws and regulations; (9) risks inherent in international operations, including exposure to fluctuations in foreign currency exchange rates and political risk; (10) the impact of new technologies; (11) changes in general economic and market conditions: and (12) changes in the regulatory environment in which SBC and AT&T operate.

The cites to webpages in this document are for information only and are not intended to be active links or to incorporate herein any information on the websites, except the specific information for which the webpages have been cited.

- I, Dennis W. Carlton, hereby declare the following:
- I, Hal S. Sider, hereby declare the following:

I. QUALIFICATIONS

- 1. I, Dennis W. Carlton, am Professor of Economics at the Graduate School of Business of The University of Chicago. I have served on the faculties of the Law School and the Department of Economics at The University of Chicago and the Department of Economics at the Massachusetts Institute of Technology. I specialize in the economics of industrial organization, which is the study of individual markets and includes the study of antitrust and regulatory issues. I am co-author of Modern Industrial Organization, a leading textbook in the field of industrial organization, and I also have published numerous articles in academic journals and books. In addition, I am Co-Editor of the Journal of Law and Economics, a leading journal that publishes research applying economic analysis to industrial organization and legal matters.
- 2. In addition to my academic experience, I am a Senior Managing Director of Lexecon, an economics consulting firm that specializes in the application of economic analysis to legal and regulatory issues. I have served as an expert witness before various state and federal courts and foreign tribunals and I have provided expert witness testimony before the U. S. Congress. I have submitted testimony before the Federal Communications Commission in a number of matters. In 2004, I was appointed to the Antitrust Modernization Commission, a 12-member commission created by Congress to review U.S. antitrust laws. I have previously served as a consultant to the Department of Justice regarding the Merger Guidelines of the Department of Justice and Federal Trade Commission, as a general consultant to the Department of Justice and Federal Trade Commission on antitrust matters, and as an advisor to the Bureau of the

Census on the collection and interpretation of economic data. A copy of my curriculum vita is attached in Appendix 1 to this affidavit.

3. I, Hal S. Sider, am a Senior Vice-President of Lexecon. I received a B.A. in Economics from the University of Illinois in 1976 and a Ph.D. in Economics from the University of Wisconsin (Madison) in 1980. I have been with Lexecon since 1985, having previously worked in several government positions. I specialize in applied microeconomic analysis and have performed a wide variety of economic and econometric studies relating to industrial organization, antitrust and merger analysis. I have published a number of articles in professional economics journals on a variety of economic topics and have testified as an economic expert on matters relating to industrial organization, antitrust, labor economics and damages. In addition, I have provided economic testimony on telecommunications issues on a variety of matters before the FCC and state public utility commissions. A copy of my curriculum vita is attached in Appendix 1 to this affidavit.

II. INTRODUCTION AND OVERVIEW

4. We have been asked by counsel for SBC Communications Inc. (SBC) and AT&T Corp. (AT&T) to present our assessment of competitive issues raised by the proposed merger of these firms. This initial assessment is based on our general familiarity with developments in the telecommunications industry, our extensive review of public source data and information provided by the companies to date. We will continue to review and analyze additional data and documents during the course of this proceeding and use that information to respond to any issues raised by the Parties' Application or otherwise supplement our analysis as appropriate.

^{1.} We understand that the Parties will be submitting to the Commission additional non-public information when a protective order is in place. This information, when it is available to be reported, will enable us to make more precise several of the statements in this filing.

- 5. The proposed transaction will promote competition by creating a more efficient firm which will achieve significant cost savings and will be better positioned to develop and deploy new products and services for business and residential customers. In addition, our analysis to date indicates that the transaction is unlikely to create significant competitive problems due to a variety of characteristics of the industry and Parties, including: (i) the largely complementary nature of AT&T's and SBC's networks, services and target customers; (ii) the rapid on-going pace of developments in telecommunications technology; (iii) AT&T's prior decision to cease marketing its services to residential and small business customers; (iv) the growth of facilities-based competition for both businesses and residential consumers; and (v) the sophistication and purchasing practices of business customers as well as the importance of non-price dimensions of telecommunications services.
 - 6. The major conclusions explained in this Declaration are as follows:
 - SBC's and AT&T's businesses are largely complementary, with SBC operating a dense local network in its region and AT&T operating an extensive national and global network. Similarly, SBC is majority owner of a leading facilities-based wireless carrier while AT&T does not own wireless facilities and does not at present market wireless services. The firms also focus on serving different sets of customers, with AT&T increasingly focusing its efforts on serving large business customers with national or global needs while SBC maintains a predominantly regional focus.
 - Rapid technological changes are expanding the competitive alternatives
 available to all consumers including residential, small business and large
 business subscribers. For example, the rapid growth of Internet Protocol (IP)
 technology is blurring the distinction between voice and data services, and

- increasing the number of firms competing with legacy carriers to provide service to all categories of customers.
- Changes in technology, regulation and business strategy mean that historical and current measures of the extent of competition between the firms overstate any potential reduction in competition resulting from the proposed transaction.
 - AT&T's decision to cease marketing traditional services to residential consumers and small businesses means that it will rapidly cease to be a significant competitive factor in serving these customers in the absence of the transaction.
 - Moreover, residential customers that would have remained with
 AT&T in the absence of the transaction are likely to benefit from the
 merger because SBC, which has no plans to exit, does not face the
 same incentives as AT&T to raise prices to this group.
- Where SBC and AT&T both compete to provide a variety of data and voice services to certain business customers, they face a wide variety of competitors and conditions that make it unlikely that the transaction will harm competition either through coordinated or unilateral actions.
 - In providing service to certain business customers, SBC and AT&T face competition from interexchange carriers (IXCs), new network providers, competitive local exchange carriers (CLECs), systems integrators, equipment providers, value-added resellers and cable providers.
 - The sophistication of business consumers, the importance of non-price dimensions of service and the large and infrequent nature of the

"bidding" contracts at issue reduce the potential for the transaction to adversely affect competition.

- The transaction is unlikely to adversely affect competition for wireless services, where AT&T today has only limited plans to provide service as a reseller or mobile virtual network operators (MVNO). Similarly, the transaction is unlikely to adversely affect competition in the provision of Internet telephony, where AT&T is one of many new entrants and faces significant competition from cable companies and other providers.
- By combining firms with complementary networks and businesses, the transaction will benefit consumers by:
 - Enabling the merged firm to provide services now available to AT&T's
 large business customers to a wider range of business customers;
 - Increasing incentives to invest in new products and services by enabling innovations to be deployed to the combined firm's larger customer base.
 - Enabling the merged firm to provide "end-to-end" services to an increased number of multilocation business customers and thus to improve service reliability;
 - Enabling the merged firm to operate at substantially lower costs than those that AT&T and SBC would face separately, thus enabling it to compete more effectively against new firms deploying new, lower-cost technologies.

7. The remainder of this declaration provides the basis for these initial conclusions. Section III presents: (i) background information on SBC and AT&T; (ii) background regarding trends in the demand for wireline telecommunications services; and (iii) an overview of consumer benefits resulting from the transaction. Section IV addresses the competitive impact of the transaction on consumer services, including wireless services. Section V reviews factors that affect the impact of the transaction on services used by business customers.

III. THE PROPOSED TRANSACTION IS LIKELY TO RESULT IN SIGNIFICANT BENEFITS TO CONSUMERS.

A. BACKGROUND ON THE MERGING PARTIES

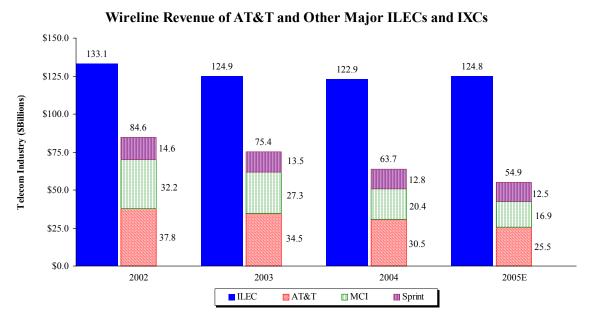
1. AT&T

- 8. AT&T provides local and long distance voice services as well as an array of local and long distance data services. It serves business customers of all sizes -- from small firms to large multinational enterprises as well as residential customers, although it is no longer marketing its traditional services to the latter group. In 2004: ²
 - Business services accounted for 74 percent of AT&T's revenue, with 26
 percent from consumer services, although the share accounted for by
 consumers is declining rapidly.
 - Long distance voice services accounted for 84 percent of AT&T's voice revenue, with 16 percent coming from local voice services.

^{2.} AT&T Corp. Fourth-Quarter and Full-Year 2004 Financial Results, Historical Segment Data, January 20, 2005.

9. AT&T and other IXCs have experienced substantial declines in wireline revenue in recent years and these declines have been far greater than those experienced by ILECs.³ Between 2002 and 2004, ILEC' wireline revenues fell about 7.5 percent. During the same period, AT&T's revenue fell 19 percent, with consumer services revenue falling 31 percent and business revenue falling 15 percent.⁴ Revenue for AT&T and other IXCs are projected to continue to decline. AT&T estimates that its 2005 revenue will fall 16.5 percent and analysts forecast that AT&T's revenue will fall by 42 percent between 2004 and 2008.⁵ ILEC revenue is projected to increase slightly in 2005 and analysts forecast that it then remain nearly unchanged through 2008.⁶

Figure 1



Source: Company financial reports, UBS "Wireline Telecom Play Book" - 1/14/2005.

Note: ILECs include SBC, Verizon, Bellsouth, Qwest, CenturyTel, Citizens, and Commonwealth.

3. AT&T spun off its cable and wireless operations in 2001.

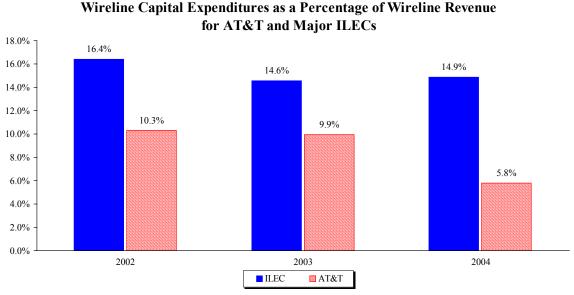
^{4.} AT&T Corp. Fourth-Quarter and Full-Year 2004 Financial Results, Historical Segment Data, January 20, 2005 and AT&T Corp. Earnings Commentary, Quarterly Update – Fourth Quarter 2002, January 23, 2003, p. 8. All data exclude revenue from wireless or cable operations.

^{5.} AT&T press release, "AT&T Announces Fourth-Quarter Results," January 20, 2005, and UBS Investment Research, "Wireline Telecom Play Book," January 14, 2005, p. 46.

^{6.} UBS Investment Research, "Wireline Telecom Play Book," January 14, 2005, p. 46.

10. In the face of rapidly declining wireline revenue, AT&T and other IXCs significantly reduced their capital expenditures. Between 2002 and 2004, AT&T's wireline capital expenditures fell 55 percent, from \$3.9 billion to \$1.8 billion. AT&T's wireline capital expenditures were 10 percent of its wireline revenue in 2002 but less than six percent of 2004 revenue.⁷ Over the same time period, ILECs' capital expenditures fell (-16 percent) although this decline was substantially less than that of AT&T and other IXCs. Capital expenditures (expressed as a percentage of revenue) for AT&T and major ILECs are shown in Figure 2.

Figure 2



Source: Company financial reports, UBS "Wireline Telecom Play Book" - 1/14/2005.

Notes: ILECs include SBC, Verizon, Bellsouth, Qwest, CenturyTel, Citizens, and Commonwealth.

Excludes wireless revenue and capital expenditures.

11. Nonetheless, AT&T has continued to fund innovation and investment in its networks and has maintained its reputation as a leading provider of innovative and high-quality voice and data services for business customers. For example, a recent report on IP-VPN (Internet Protocol-Virtual Private Network) services, a leading new data technology, noted that:

^{7.} AT&T financial statements.

... AT&T has maintained their leadership in this very competitive market because of their strong brand for reliable data and voice networking services, the breadth of their services and remote access options, and their recognized expertise in VPN and security services. They have been highly innovative this past year in adding new offerings and features to their MPLS, remote access, and security services.⁸

AT&T was also rated in a Yankee Group survey as the top-ranked wholesale telecommunications vendor. AT&T has also continued to invest in improving service to large business customers. 10

- 12. Given changes in the demand for AT&T's services, as well as court and FCC decisions that invalidated regulations that enabled AT&T to acquire for resale ILECs' local services at TELRIC-based rates, AT&T announced a dramatic change in its business strategy in mid-2004. ¹¹ More specifically, AT&T announced that it would:
 - Stop marketing traditional local and long distance services to residential customers and selectively raise prices to these customers;¹²
 - Stop marketing to some and reduce marketing to other smaller business customers;
 - End efforts to "win back" residential and small business consumers that terminate service with AT&T.
 - 13. AT&T has taken a variety of steps to implement this new business plan:

^{8.} In-Stat, High Growth and Lots of Opportunity: The US IP VPN Services Market, January 2005, p.20.

^{9.} Yankee Group, "AT&T and Level 3 Earn Top Marks for Quality in Yankee Group Wholesale Buyer Survey," October 18, 2004.

^{10.} See Declaration of Hussein Eslambolchi.

^{11.} See Declaration of John Polumbo.

^{12.} This decision did not affect the AT&T CallVantage service, which was introduced in 2004.

- AT&T undertook extensive headcount reductions in its Consumer unit in areas relating to marketing and customer care and plans further headcount reductions through 2005.¹³
- AT&T has also retired much of the infrastructure that it used to acquire and serve residential customers.¹⁴

2. SBC

- 14. SBC provides local and long distance voice as well as local and long distance data services, primarily in a 13-state region. SBC's mix of service revenue differs significantly from that provided by AT&T. In 2004, for example:
 - Business services accounted for 48 percent of SBC's retail wireline revenue,
 with 52 percent derived from consumer services.¹⁵
 - Long distance voice services accounted for 14 percent of SBC wireline voice revenue, with 86 percent coming from local voice services. 16
- 15. SBC's revenue, unlike AT&T's, has grown in recent years. Since receiving authorization to provide long distance services in each state in which it operates between 2000 and 2003, SBC has rapidly expanded its provision of long distance services. It now provides long distance to 44 percent of its local service customers. SBC's wireline revenues have also increased as a result of the sale of DSL services. SBC now has over 5 million DSL lines in

^{13.} See Declaration of John Polumbo.

^{14.} See Declaration of John Polumbo.

^{15.} Based on internal SBC documents.

^{16.} SBC 4Q04 Earnings Information, http://www.sbc.com/Investor/Financial/Earning info/docs/Segments IB 4Q04.xls

^{17.} UBS, Wireline Telecom Play Book, January 14, 2005, p.20.

service.¹⁸ In addition, SBC owns a 60 percent economic interest in Cingular Wireless, one of the leading wireless service providers, which serves both businesses and consumers.

16. SBC's authorization to provide long distance services also enabled it to expand provision of voice and data services to multilocation business customers. SBC uses WilTel and others to transport its long distance traffic.¹⁹ In 2003, SBC launched an initiative to expand SBC's provision of voice and data services to multilocation business customers. It deployed facilities on a limited basis in 30 metropolitan areas outside of its 13-state footprint. Based on its experience in the marketplace, SBC has decided to focus its attention on seeking to serve business customers with locations predominantly located within SBC's footprint.²⁰ SBC typically does not compete for business where more than half of the customer's locations are out of its footprint or where 20 percent or more of the traffic is international.²¹

B. FACTORS AFFECTING THE DEMAND FOR TRADITIONAL WIRELINE SERVICES

1. General Trends

17. Dramatic changes in technology and regulation are resulting in fundamental changes in the competitive landscape for the provision of wireline services. These factors have placed increased competitive pressure on suppliers of wireline services for all types of consumers. These phenomena, and others, have reduced demand for traditional wireline services.

^{18. 4}Q04 Investor Briefing, January 26, 2005.

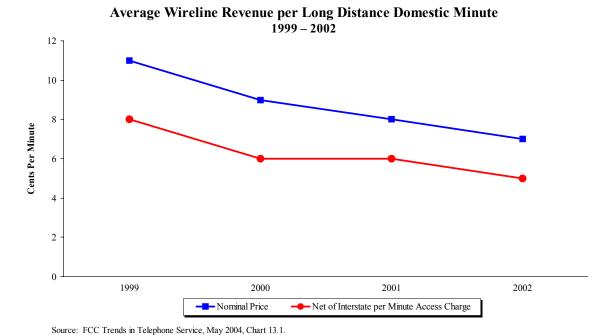
^{19.} See Declaration of James Kahan.

^{20.} See Declaration of James Kahan.

^{21.} See Declaration of James Kahan.

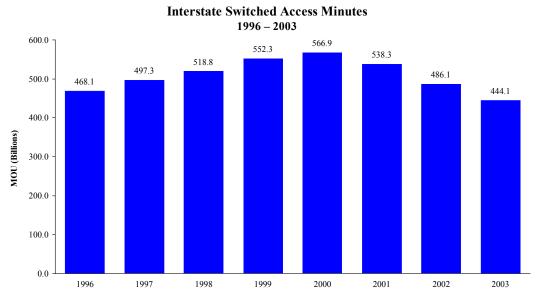
 FCC data indicate that average revenue per minute for wireline long distance services has fallen from \$0.11 per minute in 1999 to \$0.07 per minute in 2002, the last year for which data are available. Similar declines are observed if prices are measured net of access charges.

Figure 3



Wireline long distance minutes of use have also fallen despite falling prices.
 FCC data indicate that minutes of interstate calling fell more than 20 percent between 2000 and 2003.

Figure 4



Source: Trends in Telephone Service Report, Industry Analysis and Technology Division, Wireline Competition Bureau, (May 2004).

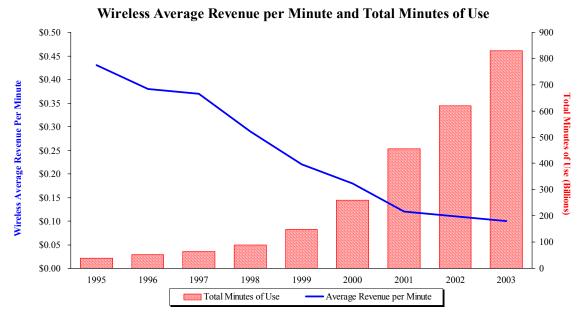
- The number of ILEC access lines, as well as the number of calls processed by ILECs, has fallen in recent years.²²
- 18. Among the factors contributing to these trends are: (i) the explosive growth in wireless service, and (ii) the growth of high-speed Internet services and the growth in non-traditional Internet based communications. In addition, the rapid on-going deployment of voice of Internet Protocol (VoIP) for the provision of voice services is widely expected to contribute to continued declines in demand for traditional wireline services. Each of these factors is briefly summarized below.

22. See FCC, "Trends in Telephone Service," May 2004, Tables 7.1 and 10.2.

2. The growth of wireless service

- 19. The unprecedented growth in wireless services has been widely documented:
 - Between 1995 and 2003, the number of wireless subscribers grew from 34 million to almost 160 million. Over the same period, monthly minutes of use per subscriber increased from 120 to more than 500.²³
 - Together, total minutes of use of wireless services increased from 38 billion in 1995 to 830 billion in 2003, a more than 20-fold increase in less than 10 years.

Figure 5



Source: FCC, Ninth Report on Wireless Competition, FCC 04-216, September 28, 2004, p A-11. CTIA Wireless Industry Indices, Year-End 2003 Results, May 2004, p 252.

- 20. This increased utilization of wireless services is due in part to a rapid decline in the average revenue per minute for wireless services, which fell from \$0.43 in 1995 to \$0.10 in 2003, a 77 percent decline.
- 21. The explosive growth in wireless services and its impact on wireline services is reflected in the market value of telecommunications firms. AT&T Wireless and Nextel, two

^{23.} FCC, Ninth Competition Report, FCC 04-216, September 28, 2004, Table 1 and Table 9.

of six major nationwide wireless companies, were valued in recent transactions at \$41 billion and \$35 billion respectively. In contrast, this proposed transaction values AT&T at \$16 billion.²⁴

22. While available data indicate that a modest (but increasing) share of subscribers have "cut the cord" and no longer subscribe to wireline service, data also indicate that consumers readily substitute minutes on wireless services for minutes on wireline services. For example, a recent Yankee Group survey reports that "in U.S. households, more than 36% of local calls and 60% of long-distance calls have been replaced by wireless." This substitution is facilitated by the growth of "bucket" plans, which effectively lower the marginal cost of many local and long distance calls to zero. Thus, wireless services are an alternative technology that reduces usage of wireline phones.

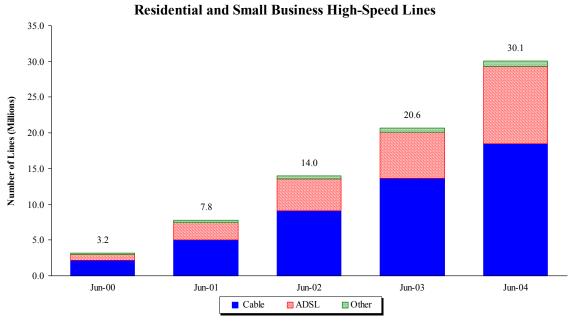
3. Broadband services

23. Another dramatic shift affecting the demand for wireline services in recent years is the increased adoption of high-speed Internet access technologies. FCC data indicate that the number of residential and small business high speed lines has grown from less than 4 million lines in 2000 to over 30 million lines in 2004. Consumer broadband services allow for more intensive use of the Internet than dial-up services.

24. See, "R.I.P., AT&T," Business Week Online, Feb. 16, 2005, http://www.businessweek.com/bwdaily/dnflash/feb2005/nf20050216_9529_db035.htm?site=cbs&campaign_id=cbs ("The dollar amount seems puny compared to other epic mergers this year and doesn't begin to reflect AT&T's storied place in American history.")

^{25.} Yankee Group, "The Success of Wireline/Wireless Strategies Hinges on Delivering Consumer Value," October 2004, p. 7.

Figure 6



Source: FCC Report High-Speed Services for Internet Access: Status as of June 30, 2004, December 2004, p 8.

24. The growth of broadband services has contributed to a decline in the demand for second phone lines, which are often used in part to accommodate dial-up Internet access.

Additionally, as discussed in more detail below, broadband Internet connections allow for the use of VoIP products.

4. E-mail and instant messaging

25. The increase in Internet utilization has resulted in extraordinary growth in the volume of e-mail and instant messaging, which provide alternatives to both business and personal telephone calls. An estimated 9 billion e-mails are sent each day in the U.S. ²⁶ In addition, 80 million people in the U.S. use instant messaging (IM) and it is estimated that 7 billion IMs are sent each day worldwide. While it is difficult to quantify the amount of voice

^{26.} Legal Tech Newsletter, "E-Mail and Records Management in the Legal Environment," 11/14/03, cited in UNE Fact Report 2004, October 2004, p. I-6.

^{27. &}lt;a href="http://www.webpronews.com/news/ebusinessnews/wpn-45-20040824AOLAnnouncesthatInstantMessagingisMorePopularthanEver.html">http://www.webpronews.com/news/ebusinessnews/wpn-45-20040824AOLAnnouncesthatInstantMessagingisMorePopularthanEver.html, cited in UNE Fact Report 2004, October 2004, p. I-6.

telephone traffic these new technologies have displaced, analysts recognize that such substitution occurs. For example, In-Stat/MDR has stated that "[c]onsumers are using e-mail and instant messaging in place of a phone call." According to an analysis presented to the FCC in the Triennial Review Order (TRO) remand proceedings, "if just 5 percent of [email and IM messages] substitute for a 90 second voice call, this data traffic has displaced more than 10 percent of the voice traffic that would otherwise have been handled by the incumbents' networks."

5. VoIP

- 26. Voice over Internet Protocol (VoIP) is a new technology for providing local and long distance voice services that is widely expected to provide significant competition for traditional wireline services. VoIP has already been deployed by a number of firms.

 Prominently, cable providers are in the midst of deploying VoIP services throughout their networks. While VoIP services are generally targeted to serve residential and small business consumers, IP based virtual private networks (IP-VPNs) are being deployed by businesses of all sizes to carry both voice and data traffic. (IP-VPNs are discussed in more detail in Section V below.)
- 27. VoIP can provide high quality local and long distance services, and can include advanced features, such as call logs and "follow-me" calling,³⁰ as well as enhanced 911 services.³¹ Analysts agree that VoIP services can be provided at lower cost than traditional circuit-switched voice services provided by legacy carriers. For example, Bernstein Research

^{28.} In-Stat/MDR, "State of the U.S. Carrier Market," October 2003, p. 6.

^{29.} UNE Fact Report (2004), p. I-6.

^{30.} See for example, Vonage's description of its "Call Hunt" feature. http://www.vonage.com/features.php?feature=call hunt

^{31.} See, for example, http://www.timewarnercable.com/austin/products/digitalphones/default.html.

concludes that "[d]ue to the relatively low cost structure of VoIP, cable VoIP operators will be able to absorb significant price decreases while maintaining attractive margins."³²

- 28. There are two basic types of VoIP services.
 - Cable-based VoIP services are installed by the cable provider and do not require that the consumer subscribe to a broadband service. The service is connected to a home's inside wiring so all handsets in the home are connected to the service. 33 Cable-based services typically make extensive use of dedicated facilities as well as backup power in the event of a disruption. Bernstein Research estimates that VoIP service will be available to 87 percent of U.S. households by the end of 2006. Cable MSOs today offer unlimited all-distance voice service at roughly \$35 to \$40 per month. 35

^{32.} Bernstein Research, "Cable and Telecom: VoIP Will Reshape Competitive Landscape in 2005," p. 1.

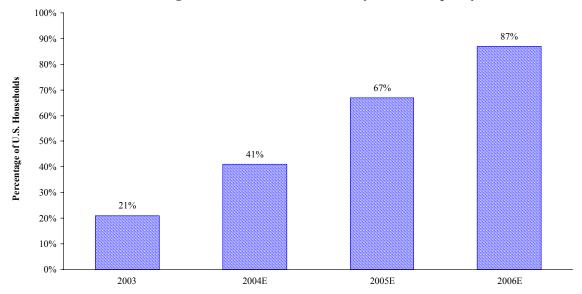
^{33.} See, e.g., http://www.cox.com/Telephone/FAQs.asp#P25_5970 ("Will my house need to be rewired? No, the existing wiring inside your home will operate just as it always has.")

^{34.} Cox, for examples, states (p. 12) that in designing its VoIP network that it "assumes at least four hours of standby power in the HFC plant for both technologies, with in-home battery back-up for the VoIP MTA". Cox (p. 3) also states that it "owns and operates its own end to end network infrastructure. Cox Communications White Paper, "Voice over Internet Protocol: Ready for Prime Time," May 2004, p. 12.

^{35.} Stratecast Partners, "Residential Broadband Voice: End-User Experience," January 7, 2005, p. 2.

Figure 7

Percentage of U.S. Households Passed by Cable Telephony



Source: Bernstein Research Weekly Notes, December 17, 2004. Cable and Telecom: VoIP Reshape Competitive Landscape in 2005, p 2. Note: Includes VoIP and Circuit-Switched Telephony.

"Virtual" services provided over existing broadband connections are self-installed by subscribers and serve only those handsets connected to the broadband service. These services typically utilize the public Internet for transport. Virtual service providers may not offer E911 service or backup power in case of blackouts.³⁶ In addition to AT&T's CallVantage service, non-cable firms that offer "virtual" VoIP include Vonage, 8x8, BroadVoice, BroadVox, delta-three, Net2Phone, Primus Lingo and VoicePulse. These firms offer packages of unlimited local and long distance voice for prices ranging from \$20 to \$30 a month.³⁷

^{36. &}lt;a href="http://www.fcc.gov/voip/">http://www.fcc.gov/voip/

^{37.} Stratecast Partners, "Residential Broadband Voice: End-User Experience," January 7, 2005, pp. 2-3.

29. Analysts view the VoIP products being rolled out by cable operators as a direct competitive threat to the ILECs. Morgan Stanley concludes that "[t]he introduction of VoIP, especially by cable companies, represents the largest long-term competitive threat to the Bells, in our view." Other analysts agree:

During the end of 2004 cable companies made significant moves into the telecom space. It was reported that Time Warner ... expects to have 200K Digital Phone subscribers by 2004 end, and is currently adding 10K subscribers per week. CableVision ... passed the 250K telephony subscribers milestone and its Optimum Voice service has been adding 1,000 customers per day in the New York area. Comcast ... continued to discuss plans to offer phone service to 40M homes by the end of 2006.... Going forward, we see RBOC competitive pressures increasing as internet telephony services become more feature rich, cable services become more on-demand orientated, and consumers crave more integrated offerings.³⁹

C. THE MOTIVATION FOR THE PROPOSED TRANSACTION AND POTENTIAL CONSUMER BENEFITS

30. The proposed transaction reflects the companies' response to fundamental changes in the demand and supply of telecommunications services and is expected both to result in substantial cost savings and to bring substantial benefits to consumers. The cost savings and consumer benefits are described in greater detail in the accompanying declarations of SBC's James Kahan and Christopher Rice and AT&T's Hossein Eslambolchi.

1. The transaction combines firms with complementary networks and business focuses.

31. As discussed above, AT&T's and SBC's operations are highly complementary. For example, AT&T operates a dense national and international long distance network and has limited assets used to provide local services. SBC operates a dense local network in 13 states and has limited out-of-region and long distance assets. The combination of these networks

^{38.} Morgan Stanley, "3Q04 Trend Tracker: Let the Good Times Roll?" December 2004, p. 22.

^{39.} Blaylock Partners, "Telecommunications: Wireline Services," January. 20, 2005, p. 2

enables the merged firm to better serve business customers by increasing its ability to provide "end-to-end" services to as many of its locations as possible.

32. The provision of end-to-end service improves the ability of a carrier to control and monitor network performance, which is important to many business customers.⁴⁰ Traffic handoffs can reduce efficiency and degrade quality, as well as result in delays in signal flow. By carrying more of its own traffic from end to end, the merged company will be able to reduce the number of handoffs necessary, and thus improve service quality for its customers. These benefits can be particularly important for newer services such as video conferencing, IP television and VoIP.⁴¹

2. The transaction enables SBC to offer its subscribers services that otherwise would be available only to AT&T larger business customers.

- 33. As noted above, AT&T is recognized as a provider of innovative services. As described in the accompanying declaration of Hossein Eslambolchi, AT&T, through AT&T Labs, has deployed a variety of business services and features that could be provided to SBC's base of business customers and consumers. For example:⁴²
 - AT&T has deployed advanced network security capabilities such as Internet
 Protect and inline application security monitoring services. Internet Protect is
 a security alerting and notification service that offers information regarding
 potential real-time attacks that are in the early formation stages. Inline
 application security monitoring services can actively block and quarantine
 anomalous behaviors detected within applications.

^{40.} See Declaration of James Kahan.

^{41.} See Declaration of Christopher Rice.

^{42.} See Declaration of Hossein Eslambolchi.

- AT&T also has introduced systems that use artificial intelligence and speech
 recognition to shorten and simplify ordering, provisioning and requests for
 repair. These capabilities were developed for enterprise customers, but can be
 readily extended to consumers and small business customers.
- 34. According to Dr. Eslambolchi, AT&T Labs is also working on a number of projects that have the potential to benefit consumers and smaller business customers as well as the enterprise customers they are currently targeted. These projects include IP video services (with obvious application to consumers), and speech and text recognition technologies.⁴³

3. The merged carrier will have greater incentive to invest in new services.

- 35. More generally, the proposed transaction will increase the merged firm's incentive to invest in the development of new services. With a broader customer base and more extensive network, the merger enables the firm to deploy innovations rapidly to a broader base of customers. Similarly, the merger increases the incentive of the combined firm to invest in network features that reduce cost and enhance productivity, by enabling the benefits of such improvements to be realized over a wider network.
- 36. In the absence of this transaction, AT&T would be selling its current and future innovative services predominantly to a base of larger business customers. With this transaction, however, the combined firm will have the incentive and ability to market them to a wider customer base, including smaller businesses and consumers.
- 37. SBC's merger-related plans already anticipate that it will increase spending on certain new AT&T technologies above the level budgeted by AT&T. For example, SBC plans to fund deployment of new AT&T technologies through its network, including "click-through" provisioning on all-optical networks, and enhanced security solutions. Furthermore, SBC also

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^{43.} See Declaration of Hossein Eslambolchi.

plans to provide these services to small and medium sized business as well as enterprise customers.⁴⁴

4. The proposed transaction is expected to result in significant cost savings.

- 38. SBC estimates that the merged firm will incur substantially lower costs than would the be incurred if the two firms operated separately. More specifically, SBC estimates that the transaction will result in annual cost savings of approximately \$2 billion beginning in 2008.⁴⁵
 - 39. These cost reductions come from a variety of sources:
 - SBC estimates that the merged network will enable it to more efficiently distribute traffic across the combined network, increasing utilization where there is excess capacity and routing traffic to avoid segments near capacity. This also would enable traffic to be delivered with fewer "hops" (network exchange points), which contributes to higher service quality. 47
 - The transaction also enables the merged firm to reduce a variety of additional costs relating to, for example: (i) consolidation of billing and operating support systems: (ii) elimination of duplicate facilities; (iii) ability to obtain lower prices from equipment vendors.⁴⁸
 - SBC also estimates the merged firm will achieve a 26 percent reduction in operating personnel used for such functions as enterprise data ordering, data provisioning and care functions, network management, and access

^{44.} See Declaration of Christopher Rice.

^{45.} See Declaration of James Kahan.

^{46.} See Declaration of Christopher Rice.

^{47.} See Declaration of Christopher Rice.

^{48.} See Declaration of Christopher Rice.

management.⁴⁹ These headcount reductions result from the deployment by SBC of AT&T technology that enables customers to make orders and request repairs through computer-based systems. As noted above, AT&T has deployed systems that simplify the ordering, provision and repair processes for business customers.⁵⁰

IV. CONSUMER SERVICES

40. This section addresses issues relating to the competitive effect of the proposed transaction on services sold to consumers (including residential and very small business customers with under five lines). While AT&T has long been a major provider of long distance services to residential consumers and has provided local services on a resale basis in recent years, its declining sales as well as its recent decision to cease marketing traditional services to consumers means that current and historical information on AT&T's activities is not relevant for evaluating the impact of the proposed transaction on consumers. Additionally, the proposed transaction will have no significant competitive effect on the provision of wireless and VoIP services.

A. CONSUMER SERVICES SOLD BY AT&T AND SBC

1. AT&T

41. As noted above, consumer services account for roughly 25 percent of AT&T's 2004 revenue, although this figure is expected to decline rapidly due to AT&T decision to cease marketing consumer services.⁵¹ Roughly 65 percent of AT&T's consumer services revenue is from "stand alone long distance" (i.e., consumers that do not obtain local service from AT&T)

^{49.} SBC, "SBC + AT&T A Premier Provider for a New Era of Communications," Special Analyst Meeting Notes, February 1, 2005, p. 34.

^{50.} See Declarations of James Kahan and Hossein Eslambolchi.

^{51.} AT&T Corp. Fourth-Quarter and Full-Year 2004 Financial Results, Historical Segment Data, January 20, 2005.

while 35 percent of consumer revenue is from subscribers that purchase a local/long distance bundle. The local component of such bundles reflects resold ILEC services purchased at TELRIC-based rates for the unbundled network elements platform (UNE-P). As discussed earlier, AT&T no longer markets local/long-distance bundles or stand-alone long distance services, nor does it attempt to win back customers that it has lost. AT&T executives have characterized their current position as "harvesting" the business and as an "exit over time."

42. AT&T has recently introduced AT&T CallVantage service, a voice-over-Internet-Protocol (VoIP) service in 100 MSAs. This service is provided using a broadband Internet connection, with calls transmitted through the public Internet for termination on the public switched network or with other VoIP subscribers. AT&T CallVantage service offers unlimited local and long distance calling for \$30 a month, although customers must separately have a broadband Internet connection. We understand that at the end of 2004, AT&T CallVantage had significantly fewer subscribers than other major providers of VoIP services. 55

2. SBC

- 43. As discussed above, more than half of SBC's retail wireline revenue in 2004 reflected sales to residential consumers.⁵⁶ These revenues were distributed as follows: ⁵⁷
 - Local voice services account for roughly 70 percent of SBC's 2004 consumer revenue. Local services for consumers remain subject to price regulation in each of the 13 states in which SBC operates.

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^{52.} AT&T Corp. Fourth-Quarter and Full-Year 2004 Financial Results, Historical Segment Data, January 20, 2005.

^{53.} AT&T 4Q04 Earnings Conference Call, January 20, 2005, p. 8.

^{54. &}lt;a href="http://www.usa.att.com/callvantage/plans/index.jsp">http://www.usa.att.com/callvantage/plans/index.jsp

^{55.} As noted above, we understand that the Parties will be submitting to the Commission more specific non-public information after a protective order is in place.

^{56.} These calculations exclude revenue attributable to Cingular as well as SBC's resale of EchoStar's Dish Network satellite television services.

^{57.} Based on internal SBC documents.

- Long distance services account for 16 percent of SBC's 2004 wireline consumer revenue. Other than SNET operations which it acquired, SBC entered into the provision of long distance service when it gained §271 approval for Texas in June 2000. By the end of 2003, SBC had been authorized to sell long distance in each of the 13 states in which it operates as an ILEC.⁵⁸
- DSL accounts for about 10 percent of SBC's 2003 wireline consumer
 revenue ⁵⁹
- 44. SBC offers each of these voice services on a stand alone basis or in various bundles, including "all-distance" voice bundles that include local and long distance services.
 - B. AT&T'S HISTORICAL AND CURRENT ROLE IN THE PROVISION OF CONSUMER SERVICES IS NOT RELEVANT FOR EVALUATING THE COMPETITIVE IMPACT OF THE PROPOSED TRANSACTION
- 45. In recent years, AT&T, MCI and others offered local services by reselling ILECs' local service based on UNE-P at TELRIC-based rates. The final chapter in this long history is reflected in the FCC's recent rules that phase out by early 2006 ILECs' obligation to offer UNE-P service. As described above, the FCC's decision to end ILECs' obligation to offer UNE-P at TELRIC-based rates contributed to AT&T's decision to stop marketing local and long distance services to consumers. 61
- 46. AT&T's decision to cease marketing consumer services and to "harvest" its customer base means that, in the absence of the proposed transaction, AT&T's current and

^{58. &}lt;a href="http://www.fcc.gov/Bureaus/Common Carrier/in-region applications/">http://www.fcc.gov/Bureaus/Common Carrier/in-region applications/

^{59.} Based on internal SBC documents.

^{60.} FCC, Order on Remand, FCC 04-290, February 4, 2005, ¶199.

^{61.} The Declaration of John Polumbo discusses in more detail how the change in the FCC's regulations affected AT&T's ability to compete for consumers. For the announcement see, http://www.att.com/news/2004/06/23-13121

historic share overstates its future competitive significance. There are two reasons for this. First, in the absence of the transaction, AT&T's share of subscribers would be lower than its current share as customers continue to migrate away without being replaced. Second, for any given share that AT&T might have in the future, its decision to "harvest" its customer base means that AT&T is not competing to attract new customers.

- 47. Analysts forecast that AT&T's customer base will suffer rapid attrition in the absence of the proposed transaction. Morgan Stanley forecasts that AT&T's Consumer revenues will fall from almost \$8 billion in 2004 to \$3.5 billion in 2006 and to zero by 2010.⁶² Similarly, Bernstein Research forecasts that AT&T's consumer revenues will decline by 60 percent by the end of 2006.⁶³
- 48. As part of its "harvesting" strategy, AT&T has already instituted price increases. For example, AT&T CEO Dave Dorman has stated that AT&T is "carefully managing the decline in [and] harvest of those businesses that we will exit over time as those customers run off."
- 49. AT&T has already raised rates for consumer local and interstate long distance services. 65
 - In late 2004, AT&T raised by \$1 to \$3 per month the retail rates for various local service packages with prices that range from \$12 to \$30 per month.
 - In December 2004, AT&T raised rates in a variety of states for "all distance bundles" by \$2 to \$5 per month.

^{62.} Morgan Stanley, "AT&T Corp.", January 21, 2005, p. 5.

^{63.} Bernstein Research, "AT&T: 4Q04 Beats on Cost Cuts," January 21, 2005, p. 2.

^{64.} AT&T 4Q04 Earnings Conference Call, January 20, 2005, p.8.

^{65.} These examples are discussed in the Declaration of John Polumbo.

- AT&T has raised the monthly recurring charge for stand alone interstate long distance services by \$1 to \$2 per month for many plans.
- AT&T has also raised a number of the basic rates for international long distance services.
- 50. Changes in concentration in any market that result from the proposed transaction, such as those measured using the Herfindahl-Hirschman Index (HHI), must be evaluated using as a benchmark estimates of the shares that would prevail in the absence of the proposed transaction. Increases in concentration based on future shares necessarily would be smaller than those calculated on the basis of current shares. Similarly, even if prices were to rise as the result of AT&T's business decision to abandon marketing to consumers, any such increases cannot be considered to be merger related. To the contrary, the price expected to prevail in the future in the absence of the transaction is the appropriate benchmark for evaluating any potential impact of the proposed transaction.
- 51. The use of market shares, HHIs and changes in HHIs to evaluate the competitive impact of mergers is based on the premise that firms of all sizes remain active competitors in the marketplace.⁶⁷ Generally, a firm that does not actively compete has less of an impact on market price than one with the same market share that competes actively. In turn, industry prices will be higher when some firms in the market are not active competitors. Since AT&T would not be an active competitor in the absence of the proposed transaction, its future share overstates its

^{66.} The importance of using forward looking shares is discussed in the Horizontal Merger Guidelines of the U.S. Department of Justice and Federal Trade Commission (Revised April 1997), Section 1.521.

^{67.} The use of HHIs in merger analysis has as its theoretical basis the static Cournot model of oligopoly behavior. AT&T's stated pricing strategy is not consistent with that of a static Cournot oligopolist. See Carlton and Perloff, Modern Industrial Organization, 4th edition, Appendix 8A (p. 283-4) for a derivation of the relationship between the HHI and price-cost margins.

competitive significance and conventional measures of the change in concentration based on its future share will overstate the expected impact of the transaction on competition.

- 52. Due to both its decision to cease competing actively for mass market customers and its decreased competitive significance while it remains, AT&T would not remain a competitive factor in the marketplace for traditional telephone services in the absence of the transaction. As such, prices charged by SBC and others firms would be constrained, not by AT&T, but by other factors.
- 53. Among others, these factors include rival providers of local and long distance services. While AT&T has decided to no longer actively market consumer services, other firms have not. For example, Sage Telecom, the fourth largest provider of local service and fifth largest provider of long distance service to consumers in SBC's 13-state territory, announced that it will continue to add new residential and small business local and long distance customers despite the phase out of UNE-P. Sage now serves more than 500,000 subscribers in SBC's territory. In 2004, Sage and SBC signed a seven-year agreement for wholesale local service throughout SBC's territory. SBC has offered similar terms to similarly situated carriers. ⁶⁸ In addition, the ability of consumers to use VoIP services, wireless services, and email and other alternatives to traditional calls also will constrain market-determined prices for wireline services. These alternatives are precisely the same factors that will constrain prices following the transaction.
- 54. In addition, the transaction is likely to benefit AT&T consumers that would remain with AT&T in the absence of the transaction. As discussed above, AT&T had decided, consistent with its "harvesting" strategy, to implement a variety of consumer price increases. Following the transaction, however, these subscribers will be served by SBC. Because SBC

^{68.} Sage Telecom Press Releases, June 25, 2004 and April 5, 2004.

does not plan to exit from the provision of local or long distance services, it has strong incentives to retain AT&T's former customers and would not have the same incentives as AT&T to raise prices to these consumers. For example, SBC markets DSL and video services to its telephone subscribers and will have an incentive to retain AT&T's current customers to facilitate marketing additional services to them. Thus, AT&T's former customers are likely to be better off as a result of the transaction because it enables them to avoid the higher prices AT&T would have been expected to charge.

55. As noted above, AT&T continues to market its VoIP services to consumers. By merging SBC with a small "virtual" VoIP provider, the proposed transaction is unlikely to adversely affect competition. This is due to the factors discussed above, including: (i) the modest number of subscribers to AT&T's VoIP service, (ii) the availability of a number of providers of rival "virtual" services (including Vonage and cable providers); ⁶⁹ and (iii) competition from VoIP services provided by cable operators, which analysts expect to be the principal competitive challenge to ILECs. Analysts also view the AT&T CallVantage service as one of many providers with no special competitive significance. Lehman Brothers concludes that "[w]ithout demonstrated success, we are not assuming significant CallVantage growth." ⁷⁰

C. THE PROPOSED TRANSACTION WILL HAVE NO ADVERSE IMPACT ON THE PROVISION OF WIRELESS SERVICES

56. The proposed transaction is not likely to adversely affect competition for the provision of wireless services. SBC owns a 60 percent economic interest in Cingular Wireless, the nation's largest wireless carrier and AT&T spun off its wireless division, AT&T Wireless, in 2001.⁷¹ AT&T has previously announced it would enter as a MVNO. MVNOs are "value

^{69.} http://www.vonage.com/corporate/aboutus fastfacts.php

^{70.} Lehman Brothers, AT&T Corp., January 21, 2005, p.3.

^{71.} AT&T press release, "AT&T Splits Off AT&T Wireless," July 9, 2001, and New York Time, "AT&T in Deal to Return to Wireless Market," May 18, 2004.

added" resellers of other carriers' wireless services, such as Virgin and Qwest.⁷² After deciding in 2004 to cease marketing to consumers, AT&T decided to scale back its efforts and seek to provide wireless services to large business customers only.⁷³

57. The loss as the result of this transaction of a narrowly focused entrant reseller would not be expected to adversely affect competition. The wireless industry already has many competitors. There are several national facilities-based wireless carriers, as well as regional facilities-based carriers and other resellers. The FCC recently examined these factors and concluded that "there is effective competition in the [wireless] marketplace. In October 2004, the FCC approved (subject to minor conditions) the merger of two of six national facilities-based wireless carriers (AT&T Wireless and Cingular). These factors, and the FCC's recent analyses, indicate the proposed transaction will not harm competition in the provision of wireless services.

V. BUSINESS SERVICES

A. DESCRIPTION OF SERVICES

58. Business voice and data services offered by SBC and AT&T are described in detail in the Application and related filings. This section provides a brief overview of the scope of competition in the provision of business services and assesses the potential impact of the transaction on competition for various business voice and data services.

^{72.} FCC, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Ninth Report, WT Docket No. 04-111, September 9, 2004, at paras 39-40, and http://wirelessreview.com/ar/wireless-qwest-revisits-history/

^{73.} See, for example, AT&T 4Q04 Earnings Conference Transcript, January 20, 2005, p. 2.

^{74.} See, for example, FCC, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Ninth Report, WT Docket No. 04-111, September 9, 2004, ¶36.

^{75.} FCC, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Ninth Report, WT Docket No. 04-111, September 9, 2004, ¶2.

^{76.} FCC, Memorandum Opinion & Order, In the matter of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, FCC 04-255, ("Cingular-AT&T Order") 10/26/04, ¶147.

- 59. As a general matter, business voice revenue fell three percent between 2003 and 2004 and is forecast to decline eight percent over the next two years. By contrast, business data traffic is expected to grow significantly, although business data revenues are expected to grow more slowly than traffic due to increased competition and productivity.⁷⁷
- 60. While both SBC and AT&T today provide both local and long distance business services, including both voice and data services, there are substantial differences in the mix of services each provide and the customers that are the focus of each company's efforts.

1. AT&T Business Services

- 61. AT&T offers a variety of services to its business customers, including local voice service (provided through dedicated access and UNE-P to certain smaller business customers); long distance voice services, including domestic and international long distance; data services, including frame relay, ATM, IP VPN, and private lines; and managed services that include network design, maintenance, security, web hosting and desktop implementation. AT&T's long distance voice revenues for business services account for 85 percent of its total business voice revenues. The local/long distance mix of AT&T's data revenues is similar.
- 62. As discussed above, AT&T has stopped marketing to consumers (including businesses with less than five lines), is "becoming much more selective in [its] approach to the small business market ..." and is focusing on serving large business and government customers. ⁸⁰ The same reasons that lead AT&T to stop marketing to consumers would likely cause it to reduce its efforts to serve smaller business customers as well.

^{77.} In-Stat, Wireline in Decline, December 2004, pp.18, 24.

^{78.} See www.business.att.com

^{79.} AT&T Corp. Fourth-Quarter and Full-Year 2004 Financial Results, Historical Segment Data, January 20, 2005.

^{80.} AT&T Earnings Conference Call, January 20, 2005. (Reported by Thomson StreetEvents, pp. 3-4).

2. SBC Business Services

- 63. SBC also offers a variety of services to business customers, including local voice and data service and, since receiving regulatory approval in recent years, long distance voice and data services. SBC's retail business voice revenues are 86 percent local and 14 percent long distance. B2
- 64. In 2000 and 2001, SBC attempted to enter into the provision of enterprise services and deployed facilities in 30 out-of-region territories. These efforts, however, were largely unsuccessful. ⁸³ As discussed above, SBC in 2003 began an initiative with the goal of providing enterprise services to multilocation customers, focusing on firms with locations inside of SBC's 13-state territory.

B. ENTRY AND TECHNOLOGICAL CHANGES HAVE CREATED INCREASED COMPETITION IN THE PROVISION OF BUSINESS SERVICES

65. In recent years the widespread entry of new facilities-based telecommunications providers throughout the United States has created a variety of new competitors for both local and long distance data and voice services. Entry by service providers has been facilitated by large increases in fiber optic capacity deployed in long haul and local networks. Carriers including Qwest, Level 3, Global Crossing, Williams, Broadwing and others deployed extensive long distance fiber networks. At the same time, CLECs including AT&T (TCG), MCI (MFS, Brooks), Time Warner, Focal, as well as the new long distance providers deployed fiber networks within metropolitan areas, typically to serve central business districts.

^{81.} See Declaration of James Kahan.

^{82.} Based on internal SBC documents.

^{83.} See Declaration of James Kahan.

1. Long distance fiber and service providers

- 66. Between 1996 and 2001, the number of fiber-kilometers of optical fiber deployed in national networks increased six-fold.⁸⁴ For both long haul and metro area fiber networks, the increase in fiber deployed substantially understates the increase in potential network capacity due to improvements in electronics that increase the bandwidth than can be carried on a given strand of fiber.
- 67. Firms such as Qwest, Level 3, Broadwing, and Global Crossing that deployed fiber are now service providers. However, in addition, the new networks have also facilitated entry by additional service providers that purchased either capacity or indefeasible rights of use (IRUs) on these networks. For example, Level 3's business model focuses on providing wholesale services enabling other companies and carriers to take advantage of Level 3's national network.

2. Metropolitan area fiber and service providers

- 68. The FCC has also noted large increases in the deployment of fiber in metropolitan areas. 85 New Paradigm Resources Group (NPRG) reports that in 2004 the facilities-based CLECs tracked in its annual report operated networks with over 370,000 route miles, had deployed over 1,200 voice switches and had over 2,000 data switches in place. 86
- 69. The NPRG data identify areas in which CLECs report they operate voice and/or data networks, and provide frame relay, ATM and IP services.⁸⁷ For CLECs affiliated with

^{84.} KMI Corp., Fiberoptic Networks of Long Distance Carriers in North America: Market Developments and Forecast, November 1999, p. A-1.

^{85.} FCC, Triennial Review Order, August 21, 2003, ¶ 378.

^{86.} NPRG, CLEC Report 2005, p. 2-12, Table 9.

^{87. &}quot;Operational" networks are defined to include those in which a CLEC operates a switch within a city (an "operational" network) as well as those in which services are provided through facilities in a nearby area. CLECs that serve an area through resale are excluded from this analysis.

interexchange carriers, such as AT&T, MCI, Sprint and others, only CLEC related activities are reported. In addition, the NPRG data do not report all CLEC activity. For example, out-of-region ILEC facilities are not reported, and not all carriers report with respect to all types of facilities.

- 70. CLECs in an MSA do not necessarily serve the same routes and buildings and, to date, we have not analyzed the extent to which CLECs' facilities in a given MSA serve the same areas. Nonetheless, the NPRG data suggest that a wide variety of CLECs can deploy facilities in response to demand throughout MSAs in SBC region.
- 71. As Table 1 indicates, nearly all metropolitan areas in states served by SBC are served by multiple facilities-based CLECs that operate voice and data networks. The data indicate that the 38 MSAs in SBC's region with more than 500,000 residents have an average of 11.2 operational data networks. The data also indicate that 94.7 percent of the MSAs have 3 or more CLECs operating data networks and that 68.4 percent have five or more. (That is, only 5.3 percent have less than three networks and 31.6 percent have less than five.) On a population-weighted basis, CLEC coverage is higher, due to the fact that MSAs with larger populations typically have more CLEC activity.

Table 1

Number of CLECs with Operations in

MSAs with more than 500,000 Residents in SBC States - 2004

Service	Average Number of Networks	Population Weighted Average	Percentage of MSAs with		Percentage of Population in MSAs with	
			3+ Networks	5+ Networks	3+ Networks	5+ Networks
Facilities Based Voice Network	7.5	10.5	89.5%	71.1%	96.9%	87.8%
Facilities Based Data Network	7.7	11.2	94.7%	68.4%	98.6%	87.0%
Frame Relay	5.1	6.8	81.6%	52.6%	91.3%	77.8%
ATM Service	5.9	7.8	84.2%	65.8%	92.0%	85.1%
Internet Protocol	5.3	8.0	78.9%	57.9%	90.5%	80.7%
Fiber Network in Place	4.8	6.7	73.7%	42.1%	88.5%	72.5%

Source: New Paradigm Group CLEC Report 2005; U.S. Census Bureau.

New Paradigm reports services offered through CLEC divisions only. Includes $38\ MSAs$.

3. IP Convergence

- 72. Both legacy firms as well as entrants provide a wide variety of voice and data services. While such services have been treated as distinct markets by the FCC in the past, the growth of IP technology is rapidly blurring these distinctions. IP enables voice and data services to be carried simultaneously on the same network by the same equipment.
- 73. For example, IP based services, such as IP virtual private networks (IP VPNs), today compete directly with "traditional" data technologies (such as private lines, frame relay, and ATM) as well as with "traditional" voice services. This convergence between voice and data service has been widely recognized. According to Yankee Group, "[t]he market opportunity for convergent telephony solutions has never been greater, and we predict a significant SMB [small and medium business] adoption of converged solutions over the next 2 years." Industry research firms such as Forrester, IDC and In-Stat have all noted migration from these "traditional" services to IP services. For example, InStat notes in a recent report that:

88. Yankee Group, "Educated SMBs Have Aggressive Plans to Upgrade to Converged Phone and Data Systems," January 2004, p.2.

IP VPN [Virtual Private Network] services are generating strong revenue growth for a number of service providers, as they migrate customers from legacy Frame Relay/ATM and private-line services to these next-generation VPN services. They will also be a key battleground for service providers looking to capture the many customers who will be converging their voice, data, and video traffic onto a single service in the future.⁸⁹

- 74. Forrester research similarly concludes that "...our recent research indicates that 56% of North American enterprises plan to replace Frame Relay with some amount of IP VPN in 2005 "90"
- 75. As this suggests, revenue from traditional data services such as frame relay and ATM is expected to fall, while revenue from IP VPNs is expected to increase. In-Stat/MDR predicts that between 2004 and 2006, ATM revenues will decline by 1 percent and frame relay by 7 percent while IP VPN revenues will increase by 25 percent.⁹¹
- 76. The growth of data services, and particularly IP-VPNs, has resulted in important changes in the competitive environment. While legacy carriers often provide customers service through circuit-switched voice service and traditional data services, entrants offer competitive alternatives to business customers based on lower-cost IP-based technologies.

C. THERE ARE A WIDE VARIETY OF SUPPLIERS OF BUSINESS SERVICES

77. There is great heterogeneity among telecommunications carriers and others selling telecommunications solutions with respect to the products or services offered, geographic coverage and types of customers served. There is also great heterogeneity among purchasers of telecommunications services with respect to the mix of services required, service quality requirements, the number of employees to be served and the geographic location of those

^{89.} In-Stat, High Growth and Lots of Opportunity: The US IP VPN Services Market, January 2005, p.1.

^{90.} Forrester, IP VPNs: Build or Buy?, January 27, 2005, p.1

^{91.} In-Stat/MDR, "Wireline in Decline: US Wireline Services 2004," Table 7 and IDC, "U.S. IP VPN Services 2004-2008 Forecast and Analysis," Table 1.

employees. As a result, it is difficult to identify with any precision the scope of markets for business services.

- 78. However, as discussed below, available data indicate that a variety of providers compete to meet the telecommunications needs of all general categories of business customers. These include traditional wireline local and long distance carriers as well as a variety of facilities-based firms that have entered in recent years. In addition, non-carriers including systems integrators and equipment manufacturers have entered into the provision of services to business customers. These non-carriers design, implement and operate networks for business customers using in part wholesale transport services purchased from carriers.
- 79. The various competitors competing to serve business customers fall into a number of broad groups including traditional IXCs, new long distance network operators, CLECs, systems integrators, equipment manufacturers and their value-added resellers (VARs), and cable television companies. The nature of competition and coordination between these members groups is not easily characterized, although groups of customers face a variety of alternative suppliers. Firms compete with respect to some customers or locations but may partner in attempting to bid for contracts with other customers. Some firms (like systems integrators, manufacturers and VARS) may compete with others (such as IXCs, ILECs and CLECs) that serve as suppliers of their wholesale transport.
- 80. Some of the major competitors seeking to serve business customers are briefly described below.

1. Traditional IXCs

81. The traditional IXCs, including AT&T, MCI and Sprint, supply a variety of services to business customers. They have extensive national and international networks and

provide a variety of local and long distance voice and data services. These firms serve a wide range of business customers, from smaller business to very large scale enterprise customers.

2. Operators of new fiber networks

- 82. In the late 1990s a variety of firms deployed extensive long-haul fiber networks throughout the United States as well as internationally. This capacity is now used by those companies and others to provide voice and data telecommunications services. New network operators have expanded their reach by purchasing or trading fiber on multiple networks. In some cases, the companies have merged with other carriers with local networks, thus increasing their ability to pursue large business customers.
- 83. Principal firms in this group include: Qwest, which has a worldwide fiber optic and also includes U S West's local networks in the western United States; Broadwing which has an extensive domestic network and acquired Focal, a CLEC operating in metropolitan areas across the United States; Global Crossing, which has a national and international fiber optic network; and Level 3, which has a national and international network and focuses on providing wholesale services to other carriers.

3. CLECs

84. CLECs operate local or regional networks and many operate in a number of metropolitan areas. These companies typically deploy facilities in central business districts to serve business customers and offer a variety of voice and data services. Examples of major CLECs include XO Communications, which operates facilities in 18 metropolitan areas in SBC's region, MCI (33 areas), McLeod (49 areas), Birch (22 areas) and TimeWarner Telecom (19 areas).

^{92.} See, generally, NPRG CLEC Report 2005.

4. Systems integrators

85. Systems integrators provide managed services to larger business customers.

These services include, among other things, network design, desktop implementation, and network operation. Systems integrators purchase wholesale transport services from carriers.

IBM, EDS, and Accenture are leading systems integrators.

5. International carriers

86. Firms associated with international carriers also provide business services to U.S. companies, focusing on those with international services needs. Equant, part of the France Telecom Group, serves a variety of multinational corporations, including Ernst & Young and ABN AMRO. Similarly, British Telecom operates a U.S. network and offers managed voice and data network services.

6. Equipment manufacturers / Value added resellers

87. Like systems integrators, manufacturers of IP equipment design, implement and manage customer networks that utilize the manufacturers' equipment. Equipment manufacturers maintain organizations that provide these services, principally to larger customers. Value added resellers provide the same types of services to smaller business customers. As noted by the Yankee Group, "[c]lose collaboration allows systems integrator channel partners and vendors to gain access to SMBs." Leading firms in this category include Cisco, Avaya, Lucent, and Nortel.

7. ILECs

88. Verizon and BellSouth, like SBC, offer local voice and data services both to businesses within their footprint but also to larger business customers with locations that spill

^{93.} Datamonitor, Equant, September 27, 2004.

^{94.} Yankee Group, "Level 3 Reaches SMBs Through a Systems Integrator Channel Partner," September 2004, p. 1.

outside of their footprint. However, both of these firms, like SBC, focus on serving business that have most of their locations and employees within their home service territory. ⁹⁵

8. Cable companies

89. Cable companies operate networks of optical fiber and coaxial cable. While they are traditionally viewed as serving residential consumers, they also provide broadband services throughout the United States and are deploying IP and VoIP services to business customers. Cox, for example, markets IP VPN solutions to businesses as replacements for frame relay or private lines. It also offers traditional voice and Internet services to business customers within the cities that it serves. Analysts view cable companies as significant competitors for business customers. For example, the Yankee Group has written that "cable operators have expanded their service offerings to include voice, video, data and internet business solutions. Initially focused on the SMB market, MSOs are now looking to capture enterprise wallet share."

D. PURCHASERS OF TELECOMMUNICATIONS SERVICES ARE HIGHLY HETEROGENEOUS

- 90. Business customers are highly heterogeneous and cannot readily be classified. Business customers differ widely with respect to, among other factors: (i) the number of sites they operate; (ii) the geographical mix of these sites; (iii) geographical locations to be served; (iv) the number and types of services required; (iv) the complexity of these services; and (v) requirements regarding service reliability.
- 91. In addition, buyers differ widely with respect to their purchasing practices. Some firms choose to have a single provider for all their telecommunications services. Others may

^{95.} Frost & Sullivan / Stratecast Partners, Assessment of Verizon ESG, June 2004, pp.12-13. In-Stat, High Growth and Lots of Opportunity: The US IP VPN Services Market, January 2005, p.21.

^{96.} http://www.coxbusiness.com/connectivity/.

^{97. &}lt;a href="http://www.coxbusiness.com/">http://www.coxbusiness.com/.

^{98.} Yankee Group, "Cable MSOs Look to Penetrate the Business Market," December 2004, p. 1.

have separate carriers for, for example, local, long distance and data services. Some firms may have different providers in different locations. Some large purchasers may use multiple providers at any given location to ensure redundancy in case of a network outage. Some firms purchase services through formal Requests for Proposals (RFPs) and multiple rounds of bidding for contracts or even on-line auctions, while others purchase through informal negotiations or based on published tariff, rack, or catalog rates.

- 92. As frequently recognized by the FCC, enterprise and large business customers are often highly sophisticated, and often have IT staffs with considerable telecommunications expertise. In addition, there are a variety of consultants that advise business customers and may assist in both the design of RFPs and evaluation of bids that are received. These services are also provided to a wide range of businesses through VARs and others that offer a variety of technological "solutions" to buyers.
- 93. The procurement practices that many large firms use in obtaining customized telecommunications services further reduce the likelihood of anticompetitive effects through either through coordinated or unilateral actions. As noted above, large business customers typically request firms to submit bids in response to RFPs that describe the services desired and locations to be served. These bidding opportunities are idiosyncratic and even the form of the outcome is uncertain. A contract award could be "winner take all," or result in a split outcome, where portions of the contract are awarded to multiple bidders. As indicated above, overlapping awards for primary and secondary or backup service may be made. The range of these outcomes is not necessarily specified in advance.
- 94. In bidding situations, such as those that occur in procurement for many business customers, it is widely recognized that "market share" is a poor indicator of a firm's potential

^{99.} FCC, Bell Atlantic-GTE Order, FCC 00-221, 7/16/00, ¶121.

market power. If all firms in a bid competition are equally likely to win, it is the number of firms that best measures the extent of competition, not bidders' market shares. The Merger Guidelines of the U.S. Department of Justice and Federal Trade Commission recognize that market shares may not be relevant in such situations, and note that "[w]here all firms have, on a forward-looking basis, an equal likelihood of securing sales, the Agency will assign equal market shares."

95. Additionally, the importance of non-price elements of competition further reduces the likelihood that firms can exercise market power either unilaterally or through coordinated effects. Buyers often have customized needs and bidders do not necessarily offer the same technological solutions. In addition, any type of coordination is further complicated by the fact that different buyers place different relative weights on price and quality characteristics of bids.

E. SBC AND AT&T FACE SIGNIFICANT RIVALS FOR ALL PRODUCTS AND SERVICES FOR WHICH THEY NOW COMPETE.

96. As discussed above, rapid changes in technology as well as the heterogeneity among both consumers and service providers of telecommunications services make it difficult to define economic markets with specificity. Nonetheless, available information indicates that, for all customers and services for which AT&T and SBC compete, the firms face competition from numerous other sources. This section provides an overview of the competitive alternatives relating to broadly-defined groups of services and customers.

1. Local voice and data service

97. As discussed above, CLECs have deployed a variety of local voice and data facilities throughout the United States. Table 2 extends this analysis and shows that in virtually all areas in which AT&T operates local facilities in SBC's territory (as reported in the NPRG

^{100.} Merger Guidelines of the U.S. Department of Justice and Federal Trade Commission, (Revised April 1997), Section 1.41.

data), there are a number of other CLEC providers of the same service. These data indicate that several CLEC providers will have facilities after the transaction in nearly all metropolitan areas in SBC's territory with a population of 500,000 where AT&T operates CLEC facilities.

Table 2

Number of CLECs with Operations in MSAs where AT&T has CLEC Operations in MSAs with more than 500,000 Residents in SBC States - 2004

Service	Number of MSAs	Average Number of Networks	Population Weighted Average	Percentage of MSAs with		Percentage of Population in MSAs with	
				3+ Networks	5+ Networks	3+ Networks	5+ Networks
Facilities Based Voice Network	26	9.1	11.3	100.0%	84.6%	100.0%	92.6%
Facilities Based Data Network	14	11.1	13.1	100.0%	92.9%	100.0%	94.2%
Frame Relay	12	7.8	8.4	100.0%	100.0%	100.0%	100.0%
ATM Service	12	8.8	9.5	100.0%	100.0%	100.0%	100.0%
Internet Protocol	8	9.0	10.5	100.0%	100.0%	100.0%	100.0%
Fiber Network in Place	23	6.3	7.4	95.7%	69.6%	95.3%	84.0%

Source: New Paradigm Group CLEC Report 2005; U.S. Census Bureau.

New Paradigm reports services offered through CLEC divisions only.

2. Long distance voice and data services

- 98. As the discussion in Section V.B above indicates, there are a large number of providers of business long distance voice and data services, including MCI, Sprint and new networks such as Broadwing and Level 3. Moreover, SBC does not possess such long haul fiber facilities outside its territory, but instead serves customers' long distance needs through a wholesale arrangement with WilTel and arrangements with other carriers. Additionally, SBC's long distance voice and data services are marketed predominantly to customers that have the majority of their locations in SBC's territories. As a result, SBC is at a disadvantage in attempting to serve certain national customers since it must coordinate with other carriers in order to complete a large share of these calls.
- 99. It is generally recognized that prices for wholesale long distance services have been falling.

- Bernstein Research reports that wholesale voice pricing "typically falls at a steady rate of 10-12% per year, while data price declines regularly exceed 20%."
- In-Stat/MDR reports that, for business voice services, there is "[r]obust wireline long distance voice service competition driving service rates down "102"
- 100. A large number of firms compete successfully to provide long distance services. For example, a recent SBC report summarized competition in the provision of interLATA high capacity lines purchased by DITCO, the Department of Defense procurement authority, between August 2003 and July 2004. The report identified a variety of entrants and smaller firms. Electra was awarded the largest volume of contracts for interexchange services, followed in descending order, by OLCR, AT&T, Axxess Connect, TimeWarner Telecom, Able Business Technology, MCI, Greyman Connections, BellSouth and SBC. 103

3. Enterprise and large business customers

101. As discussed above, AT&T is a leading provider of services to enterprise and large business customers. SBC, on the other hand, is a recent entrant focusing on providing service to businesses with locations concentrated in their 13-state region. As noted above, AT&T also competes with MCI, Sprint, Qwest, systems integrators such as IBM and EDS, and others to provide services to these customers, and a large number of firms other than SBC are making efforts to expand their provision of these services to them as well.

^{101.} Bernstein Research, "U.S. Telecom: Wholesale Segment Too Large to Sweep Under Rug, But Expected to Decline at 2.5% CAGR Through '09," 1/6/05, p. 8.

^{102.} In-Stat/MDR, "Wireline in Decline: US Wireline Services 2004," December 2004, p. 25.

^{103.} SBC, "SBC Federal – DITCO Competitive Analysis," August 6, 2004, p. 3.

102. As discussed above, enterprise and large business customers are very sophisticated and purchase in large volumes. Buyers often conduct formal bids for services and both service quality and price are important dimension in firms evaluation of bids. These circumstances make it difficult for suppliers to price in a non-competitive fashion.

4. Small and medium business customers

- 103. Typically, small and medium sized business customers are less sophisticated and purchase more standardized products than larger business customers. However, as discussed above, there are many providers of standard local voice and data products, such as CLECs and VARs, which offer IP-based networks that serve these customers. Similarly, there are many providers of standard long distance voice and data products, such as traditional IXCs, new network providers, as well as resellers.
- 104. Industry analysts have recognized that cable companies now actively compete for small and medium business customers:

[C]able companies are already a competitive threat in the small business market, particularly with their cable modem services. 104

We anticipate that cable operators will grow their SMB subscriber base from 654,000 at year-end 2002 to 2.3 million by year-end 2008, representing a CAGR of 23.4 percent. 105

105. As noted above, AT&T has announced it is "becoming much more selective in [its] approach to the small business market ..." We understand that many of these businesses would be among those SBC considers to be small business ("Valued") customers (which generally generate less than \$7,000 in annual revenue) and its medium business ("Signature") customers (which generally generate less than \$48,000 annually). For the reasons discussed in

^{104.} XChange Magazine, "Vying for Small and Medium Business Customers," March 1, 2004.

^{105.} Yankee Group, "Cable MSOs Continue to Get Down to Business," July 30, 2003, p. 2.

^{106.} AT&T Earnings Conference Call, January 20, 2005. (Reported by Thomson StreetEvents, pp. 3-4.)

Section IV above, AT&T historical and current market shares are of little or no relevance in evaluating the effect of this transaction on competition in the provision of services to smaller business customers. Indeed, AT&T has advised analysts that it expects its revenue from small businesses to decline in 2005 by several hundred million dollars as a result of its change in strategy.¹⁰⁷

106. The above indicates that in the absence of this transaction, AT&T would have the incentive to "harvest" its base of smaller business customers as this group declines in size. Economic theory indicates that in such a situation a firm would find it profitable to raise price to such customers. SBC, which plans to actively serve small and medium business customers in competition with CLECs, IXCs and others, does not face these same incentives. These business customers are likely to be better off following a merger than they would have been if they remained customers of an independent AT&T.

VI. CONCLUSION

107. The proposed transaction will promote competition by creating a more efficient firm able to achieve significant cost savings and with increased incentives to develop and deploy new products and services for a wide range of customers. Our analysis to date indicates that the transaction is unlikely to create significant competitive harm due to a variety of characteristics of the industry and Parties, including the firms' complementary business and networks, the rapid technology changes now occurring in the industry, and the wide variety of competitors serving consumer and business customers.

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^{107.} AT&T Fourth Quarter 2004 Earnings Conference, January 20, 2005, pp.3-4.

I declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.

Signature:

Dennis W. Carlton

Dennis W. Carlton

Date:

Feb. 21, 2005

I declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.

Signature:

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Feb. 21, 2005

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Appendix 1

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EMPLOYMENT

LEXECON INC., Chicago, Illinois (1977 - present): President, 1997 – 2001, Senior Managing Director, 2003 - present.

UNIVERSITY OF CHICAGO, Graduate School of Business (1984 - present): Professor of Economics.

UNIVERSITY OF CHICAGO, Law School (1980 - 1984): Professor of Economics.

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OTHER PROFESSIONAL EXPERIENCE

HARVARD UNIVERSITY, Public Policy Summer Course in Economics (1977): Professor.

BELL TELEPHONE LABORATORIES (Summers 1976, 1977).

JOINT CENTER FOR URBAN STUDIES OF M.I.T. AND HARVARD UNIVERSITY, Cambridge, Massachusetts (1974 - 1975).

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FIELDS OF SPECIALIZATION

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ACADEMIC HONORS AND FELLOWSHIPS

M.I.T., National Scholar Award, 1968

Edwards Whitacker Award, 1969

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John Harvard Award, 1970

Phi Beta Kappa, 1971

National Science Foundation Fellowship, 1972 - 1975

Recipient of Post-doctoral Grant from the Lincoln Foundation, 1975

National Science Foundation Grant, 1977 - 1985

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Ph.D. Thesis chosen to appear in the Garland Series of Outstanding Dissertations in Economics

Alexander Brody Distinguished Lecture, Yeshiva University, 2000

Keynote Address to the International Competition Network, Mexico, 2004

Milton Handler Lecture, New York, 2004

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Co-editor, Journal of Law and Economics, 1980 - present

Associate Editor, Regional Science and Urban Economics, 1987 - 1997

Associate Editor, The International Journal of Industrial Organization, 1991 - 1995

Member, American Economics Association, Econometrics Society

National Bureau of Economic Research, Research Associate

Member, Advisory Committee to the Bureau of the Census, 1987 - 1990

Editorial Board, Intellectual Property Fraud Reporter, 1990 - 1995

Consultant on Merger Guidelines to the U.S. Department of Justice, 1991 - 1992

Accreditation Committee, Graduate School of Business, Stanford University, 1995

Visiting Committee, MIT, Department of Economics, 1995 - present

Resident Scholar, Board of Governors of the Federal Reserve System, Summer, 1995

Member, Advisory Board, Economics Research Network, 1996 - present

Member, Steering Committee, Social Science Research Council, Program in Applied Economics, 1997 - 1999

Participant in meetings with Committee of the Federal Reserve on Payment Systems, June 5, 1997

Participant in roundtable discussions on "The Role of Classical Market Power in Joint Venture Analysis," before the Federal Trade Commission, November 19, 1997 and March 17, 1998.

Member, Advisory Board of Antitrust and Regulation Abstracts, Social Science Research Network, 1998 - present

Participant in the Round Table on the Economics of Mergers Between Large ILECS before the Federal Communications Commission, February 5, 1999

Advisory Board, Massachusetts Institute of Technology, Department of Economics, 1999 - present

Chairman, FTC Round Table on Empirical Industrial Organization (September 11, 2001)

Professor, George Mason Institute for Judges, October 2001

Presidential Appointment to the Antitrust Modernization Commission, March 17, 2004

Editorial Board, Competition Policy International (CPI), 2004

BOOKS

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- Declaration and Ex Parte Declaration of Dennis W. Carlton in Re: <u>Joint Applications of MCI WorldCom, Inc., and Sprint Corporation for Consent to Transfer Control</u>: Before the Federal Communications Commission, CC Docket No. 99-333, February 18, 2000 (Declaration with H. Sider), and May 10, 2000 (Ex Parte Declaration with H. Sider).
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- Affidavit, Deposition and Reply Affidavit of Dennis W. Carlton in Re: <u>Gregory F. Daniel, M.D., et al., v. American Board of Emergency Medicine, et al</u>: In the United States District Court for the Western District of New York, Civil Action No. 90-CV-1086A, March 3, 2000 (Affidavit), April 17 and 18, 2000 (Deposition), and July 12, 2000 (Reply Affidavit).
- Expert Report, Reply Expert Report, Deposition and Supplemental Report of Dennis W. Carlton in Re: <u>CSX</u> <u>Transportation, Inc. V. Qwest Communications International, Inc.</u>: In the United States District Court for the Middle District of Florida, Jacksonville Division, Civil Action No. 99-412-CIV-J-21C, July 19, 2000 (Expert Report), October 11, 2000 (Reply Expert Report), January 10-11, 2001 (Deposition), and July 18, 2001 (Supplemental Report).
- Reply Declaration of Dennis W. Carlton in Re: <u>Joint Application of Northpoint Communications and Verizon</u>
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- Declaration and Reply Declaration of Dennis W. Carlton in Re: In the Matter of Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities: Before the Federal Communications Commission, Washington DC, Docket No. 00-195, December 1, 2000 (Declaration with K. Arrow and G. Becker), and January 10, 2001 (Reply Declaration with K. Arrow and G. Becker).
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- Reports, Rebuttal Reports, Deposition and Declaration of Dennis W. Carlton in Re: Micron Technology, Inc. v. Rambus Inc.: In the United States District Court for the District of Delaware, Civil Action No. 00-792, March 28, 2001 (Report), April 13, 2001 (Rebuttal Report), April 18, 2001 (Deposition), and August 17, 2001 (Report), September 17, 2001 (Rebuttal Report), and Declaration (October 1, 2001).
- Expert Report, Deposition and Testimony of Dennis W. Carlton in Re: <u>Amgen Inc. v. Ortho Pharmaceutical Corp.</u>: Endispute Arbitration, Chicago, Illinois, August 31, 2001 (Expert Report), November 27-28, 2001 (Deposition), and May 9-10, 2002 (Testimony).
- Testimony of Dennis W. Carlton in Re: <u>Empirical Industrial Organization Roundtable</u>: Before the Federal Trade Commission, Matter No. P015602 (September 11, 2001).
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- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Cigarette Price-Fixing Litigation and related cases</u>, <u>Holiday Wholesale Grocery Company</u>, et al. v. <u>Philip Morris Incorporated</u>, et al.: In the United States District Court for the Northern District of Georgia, Atlanta Division, No. 1:00-CV-0447-JOF, MDL No. 1342, December 19, 2001 (Expert Report) and January 23, 2002 (Deposition).
- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Flat Glass Antitrust Litigation</u>: In the United States District Court for the Western District of Pennsylvania, No. 97-550, MDL NO. 1200, December 20, 2001 (Expert Report) and February 4-6, 2002 (Deposition).
- Expert Report, Supplemental Expert Report, and Deposition of Dennis W. Carlton in Re: <u>Symbol Technologies</u> et al v. <u>Lemelson Medical et al and Cognex Corporation v. Lemelson Medical et al</u>: In the United States District Court, District of Nevada, CV-S-01-701-PMP (RJJ) and CV-S-01-702-PMP (RJJ), December 14, 2001 (Expert Report), May 7, 2002 (Supplemental Expert Report), and October 3, 2002 (Deposition).
- Declaration and Reply Declaration of Dennis W. Carlton in Re: Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services: Before the Federal Communications Commission, Washington DC, CC Docket No. 01-337, FCC 01-360, March 1, 2002 (Declaration with H. Sider) and April 22, 2002 (Reply Declaration with H. Sider and G. Bamberger).
- Declaration, Deposition, Reply Declaration, and Preliminary Injunction Hearing Testimony of Dennis W. Carlton in Re: Sun Microsystems Inc. v. Microsoft Corporation: In the United States District Court, Northern District of California, San Jose Division, Civil Action No. C 02-01150 RMW (PVT), March 8, 2002 (Declaration), June 27, 2002 (Deposition), August 9, 2002 (Reply Declaration), and December 4, 2002 (Preliminary Injunction Hearing Testimony In the United States District Court for the District of Maryland, Northern Division, MDL No. 1332).

- Declaration of Dennis W. Carlton in Re: In the Matter of Applications for Consent to the Transfer of Control of Licenses, Comcast Corporation and AT&T Corp., Transferors, to AT&T Comcast Corporation,

 Transferee: Before the Federal Communications Commission, Washington, D.C., MB Docket No. 02-70, April 26, 2002
- Declaration of Dennis W. Carlton In Re Shirley Robinson, et al., v. Bell Atlantic Corporation d/b/a Verizon Communications, et al., United States District Court Eastern District of Kentucky, Lexington Division, Case No. 01-98. (08/30/02 with R. Gertner).
- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Duramed Pharmaceuticals</u>, Inc. v. Wyeth-Ayerst <u>Laboratories</u>, Inc.: In the United States District Court, Southern District of Ohio, Western Division at Cincinnati, Civil Action No. C-1-00-735, August 19, 2002 (Expert Report) and September 24, 2002 (Deposition).
- Expert Report and Deposition of Dennis W. Carlton in Re: Philip Morris, Inc.: In the United States District Court for the District of Columbia, No. 99-CV-02496 (GK), May 10, 2002 (Expert Report) and September 10, 2002 (Deposition).
- Affidavit of Dennis W. Carlton in Re: <u>USG Corporation</u>, a <u>Delaware Corporation</u>, et al, In the United States Bankruptcy Court for the District of Delaware, Case No. 01-2094 (RJN), August 20, 2002 (Affidavit).
- Expert Report, Expert Rebuttal Report, and Deposition of Dennis W. Carlton in Re: <u>Sarah Futch Hall, d/b/a Travel Specialist</u>, et al., on behalf of themselves and all others similarly situated v. <u>United Airlines, Inc.</u>, et <u>al.</u>: In the United States District Court for the Eastern District of North Carolina Southern Division, No. 7:00-CV-123-BR(1), October 4, 2002 (Expert Report), November 13, 2002 (Expert Rebuttal Report), and November 21, 2002 (Deposition).
- Initial Report and Deposition of Dennis W. Carlton in Re: <u>Sunrise International Leasing Corp., v. Sun Microsystems Inc.</u>, In the United States District Court for the District of Minnesota, Civil Action No. 01-CV-1057 (JMR/FLN), March 27, 2003 (Initial Report with H. Sider) and July 30, 2003 (Discovery Deposition).
- Declaration and Reply Declaration of Dennis W. Carlton Before the Federal Communications Commission, Washington DC, in the Matter of Section 272(f) (1) Sunset of the BOC Separate Affiliate and Related Requirements, 2000 Biennial Regulatory Review Separate Affiliate Requirements of Section 64.1903 of the Commission's Rules, WC Docket No. 02-112, CC Docket No. 00-175, June 30, 2003 (Declaration with H. Sider and A. Shampine) and July 28, 2003 (Reply Declaration with H. Sider and A. Shampine).

- Dennis W. Carlton, <u>"Economic Analysis of the News Corporation/DIRECTV Transaction,"</u> submitted to the Federal Communications Commission, MB Docket No. 03-124, (with J. Halpern and G. Bamberger), July 1, 2003 (Economic Analysis to FCC). <u>"Response to William P. Rogerson and Daniel L. Rubinfeld and Duncan Cameron"</u>, with (J. Halpern and G. Bamberger), September 8, 2003. <u>"Economic Analysis of News Corporation/DirecTV Transaction (Presentation to Department of Justice)"</u>, (J. Halpern and G. Bamberger) October 2, 2003 (Economic Analysis to DOJ).
- Supplemental Declarations of Dennis W. Carlton in Re: <u>Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services</u>: Before the Federal Communications Commission, Washington DC, CC Docket No. 01-337, FCC 01-360, July 11, 2003 (before FCC with H. Sider) and September 3, 2003 (with H. Sider).
- Expert Report and Deposition of Dennis W. Carlton In Re: <u>D. Lamar DeLoach</u>, et al. v. <u>Philip Morris Companies</u>, Inc., et al. (R.J. Reynolds Tobacco Co.), In the United States District Court for the Middle District of North Carolina, Greensboro Division, Case No. 00-CV-1235, October 2, 2003 (Expert Report) and October 30, 2003 (Deposition).
- Report of Dennis W. Carlton on behalf of <u>Verizon</u>, November 18, 2003 (with K. Arrow, G. Becker, and R. Solow).
- Report and Deposition of Dennis W. Carlton In Re: Francis Ferko and Russell Vaughn as Shareholders of Speedway Motorsports, Inc. v. (NASCAR) National Association for Stock Car Auto Racing, Inc., International Speedway Corporation, and Speedway Motorsports, Inc., In the United States District Court Eastern District of Texas Sherman Division, Case No. 4:02cv50, Honorable Richard A. Schell, December 15, 2003 (Report) and January 21-22, 2004 (Deposition).
- Declaration, Deposition, and Rebuttal Declaration of Dennis W. Carlton In Re: <u>CSC Holdings, Inc. v. Yankees Entertainment and Sports Network, LLC.</u>, before the American Arbitration Association, Arbitration Proceeding, Case No 13 181 02839 03, January 23, 2004 (Declaration), February 5, 2004 (Deposition), and February 24, 2004 (Rebuttal Declaration).
- Expert Report, Discovery Deposition, Expert Report, and Discovery Deposition of Dennis W. Carlton In Re:

 Jamsports and Entertainment, LLC v. Paradama Productions, Inc., d/b/a AMA Pro Racing, Clear Channel
 Communications, Inc., SFX Entertainment, Inc., d/b/a Clear Channel Entertainment SFX Motor Sports,
 Inc., d/b/a Clear Channel Entertainment-Motor Sports, In the United States District Court for the Northern
 District of Illinois Eastern Division, Case No. 02 C 2298, March 8, 2004 (Expert Report), April 19 and 20,
 2004 (Discovery Deposition), September 28, 2004 (Expert Report), and October 4, 2004 (Discovery Deposition).
- Affidavit in Reply, Second Affidavit, and Testimony of Dennis W. Carlton In Re: The Matter of an Appeal from Determinations of the Commerce Commission (Commission) Between Air New Zealand Limited Between Qantas Airways Limited and The Commerce Commission, In the High Court of New Zealand Auckland Registry Commercial List Under The Commerce Act 1986, CIV 2003 404 6590, June 7, 2004 (Affidavit), July 6, 2004 (Second Affidavit), and July 13-16, 2004 (Testimony).
- Expert Report and Sur-Reply Expert Report of Dennis W. Carlton in (PPG Glass) in Re: <u>Jeld-Wen, et al., v.</u> <u>Asahi Glass Company Ltd., et al.,</u> No. CV 99-351 HA, July 6, 2004 (Expert Report) and September 9, 2004 (Sur-Reply Expert Report).

- Expert Report and Deposition of Dennis W. Carlton in Re: J.B.D.L. Corp. d/b/a Beckett Apothecary, et al., v. Wyeth-Ayerst Laboratories, Inc., et al., Civil Action No. C-1-01-704. CVS Merdian, Inc., and Rite Aid Corp., v. Wyeth, Civil Action No. C-1-03-781, in the United States District Court for the Southern District of Ohio Western Division, July 7, 2004 (Expert Report) and September 3, 2004 (Deposition).
- Declaration of Dennis W. Carlton on behalf of Bellsouth Telecommunications, Inc., in the matter of AT&T Corp., v. Bellsouth Telecommunications, Inc., before the Federal Communications Commission, Washington, DC 20554, July 20, 2004 (with H. Sider).
- Deposition of Dennis W. Carlton in Re: <u>Flat Glass Antitrust Litigation</u>: In the United States District Court for the Western District of Pennsylvania, Master Docket MISC No. 97-550, relates to Jeld-Wen, Inc. Docket No. 2-99-875, November 1-2, 2004 (Deposition).
- Expert Report and Declaration of Dennis W. Carlton (T-Mobile Report) in Re: <u>Wireless Telephone Services</u>
 <u>Antitrust Litigation</u>: In the United States District Court Southern District of New York, 02 Civ. 2637,
 December 20, 2004 (Expert Report and Declaration).
- Expert Report and Declaration of Dennis W. Carlton (Sprint PCS Report) in Re: <u>Wireless Telephone Services</u>
 <u>Antitrust Litigation</u>: In the United States District Court Southern District of New York, 02 Civ. 2637,
 December 20, 2004 (Expert Report and Declaration).
- Expert Report and Declaration of Dennis W. Carlton (AT&T Wireless Report) in Re: <u>Wireless Telephone</u>
 <u>Services Antitrust Litigation</u>: In the United States District Court Southern District of New York, 02 Civ. 2637, December 20, 2004 (Expert Report and Declaration).
- Expert Report and Declaration of Dennis W. Carlton (Cingular Report) in Re: <u>Wireless Telephone Services</u>
 <u>Antitrust Litigation</u>: In the United States District Court Southern District of New York, 02 Civ. 2637,
 December 20, 2004 (Expert Report and Declaration).
- Expert Report and Declaration of Dennis W. Carlton (Verizon Wireless Report) in Re: <u>Wireless Telephone</u> <u>Services Antitrust Litigation</u>: In the United States District Court Southern District of New York, 02 Civ. 2637, December 20, 2004 (Expert Report and Declaration).

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EDUCATION

Ph.D., UNIVERSITY OF WISCONSIN, Madison, Wisconsin: Economics, 1980.

M.A., UNIVERSITY OF WISCONSIN, Madison, Wisconsin: Economics, 1978.

B.A., UNIVERSITY OF ILLINOIS, Urbana, Illinois: Economics, 1976.

EMPLOYMENT

- LEXECON INC., Chicago, Illinois (October 1985 present): 1985-90: Economist; 1990-1999: Vice President; 1999-current: Senior Vice President.
- U.S. COMMISSION ON CIVIL RIGHTS, Washington, D.C., (August 1984 October 1985): Co-Director: Project on Minority Income Trends.
- OFFICE OF POLICY: U.S. DEPARTMENT OF LABOR, Washington, D.C., (May 1982 August 1984): Economist.
- PRESIDENT'S TASK FORCE ON FOOD ASSISTANCE (on leave from U.S. Department of Labor), Washington, D.C., (September 1983 February 1984): Research Associate.
- OFFICE OF RESEARCH AND EVALUATION; BUREAU OF LABOR STATISTICS, Washington, D.C., (September 1980 May 1982): Economist.
- UNIVERSITY OF WISCONSIN, Madison, Wisconsin (1978 79): Teaching Assistant.
- UNIVERSITY OF WISCONSIN, Madison, Wisconsin (1976 78): Science Writer.

FIELDS OF SPECIALIZATION

Applied Microeconomics Econometrics Industrial Organization Telecommunications Labor Economics

ARTICLES

- "Have Mergers of Large Local Exchange Carriers Led to Discrimination Against Rivals? An Empirical Investigation" July 2002 (forthcoming, ABA publication on the use of econometrics in litigation, with Dennis Carlton and Thomas Stemwedel).
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 <u>Managerial and Decision Economics</u> (1995), with Kenneth Arrow and Dennis
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 <u>Proceedings: Conference on Applications of Gross Flow Data, U.S. Bureau of the Census</u> (1985).
- "The Changing Makeup of the Military and the Effect on Labor Force Data," <u>Monthly Labor Review</u> (July 1984), with Cheryl Cole.
- "Accuracy of Response in Labor Market Surveys: Evidence and Implications," <u>Journal of Labor Economics</u> (October 1983), with Wesley Mellow.
- "Safety and Productivity in Underground Coal Mining," <u>Review of Economics and Statistics</u> (May 1983).
- "Economic Incentives and Safety Regulation," American Economist (Summer 1983).
- "Consumers and Product Safety: Market Processes and Imperfections," <u>Policy Studies</u>
 <u>Journal</u> (February 1983), with Eugene Smolensky.

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Economic Status of Americans of Eastern and Southern European Ancestry, U.S. Commission on Civil Rights (1986).

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MISCELLANEOUS

University-Industry Dissertation Fellowship, University of Wisconsin, 1979-80.

Referee for:

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Journal of Industrial Economics
Journal of Labor Economics
Journal of Law and Economics
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National Commission on Employment Policy

National Science Foundation
Policy Studies Journal
Review of Economics and Statistics
Social Science Research Council
U.S. Department of Health and Human Services
Antitrust Law Journal

TESTIMONIAL EXPERIENCE

- Declaration to the Federal Communications Commission, In the Matter of AT&T Corp. v. BellSouth Telecommunications, Inc., July 20, 2004 (with Dennis Carlton), on behalf of BellSouth Telecommunications, Inc.
- <u>FoodComm International v. Patrick James Barry et al.</u>, United States District Court for the Northern District of Illinois, Expert Report, December 24, 2003 (with David Gross), deposition January 28, 2004, on behalf of FoodComm International.
- Declaration to the Federal Communications Commission, In the Matter of Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements (WC Docket No. 02-112) and 2000 Biennial Regulatory Review of Separate Affiliate Requirements of Section 64.1903 of the Commission's Rules (CC Docket 00-175), June 30, 2003, (with Dennis Carlton and Allan Shampine), on behalf of Qwest, Verizon and SBC. Reply Declaration, July 28, 2003.
- Report to the Civil Rights Division of The U.S. Department of Justice, <u>Racial Differences in Citations for Traffic Violations in Cleveland, Ohio</u>, June 27, 2003 (with David Gross), on behalf of the U.S. Department of Justice.
- Sunrise International Leasing Corporation v. Sun Microsystems, Inc., United States District Court for the District of Minnesota, No. 01-CV-1057 (JMR/FLN). Affidavit on behalf of Sun Microsystems, March 2003 (with Dennis Carlton), relating to damage issues.
- <u>Sunrise International Leasing Corporation v. Sun Microsystems, Inc.</u>, United States District Court for the District of Minnesota, No. 01-CV-1057 (JMR/FLN). Affidavit on behalf of Sun Microsystems, January 2003, relating to discovery issues.
- <u>Vitamin Antitrust Litigation</u>, MDL No. 1285, Declaration on behalf of opt-out plaintiffs, November 2002 (with William Landes and Gustavo Bamberger), relating to niacin damage issues.
- Mesler v. Prudential Insurance, et al., Circuit Court of Cook County, Illinois, No. 99 L 37, November 2002, on behalf of Prudential Insurance, et al. (Deposition testimony, January 30, 2003; March 6, 2003).
- MHC Financing Limited Partnership v. City of San Rafael, United States District Court for The Northern District of California, Expert Report on behalf of MHC, September 13, 2002 (with Daniel R. Fischel); Supplemental Report, September 30, 2002.
- <u>Vitamin Antitrust Litigation</u>, MDL No. 1285, United States District Court for the District of Columbia, deposition testimony, August 7-8, 2002, August 27, 2002, on behalf of opt-out plaintiffs.
- <u>Vitamin Antitrust Litigation</u>, MDL No. 1285, United States District Court for the District of Columbia. Declaration on behalf of opt-out plaintiffs, August 2002 (with William M. Landes and Gustavo Bamberger), relating to present value adjustment.

- <u>Vitamin Antitrust Litigation</u>, MDL No. 1285, United States District Court for the District of Columbia. Reply Expert Report on behalf of opt-out plaintiffs, July 2002 (with William M. Landes and Gustavo Bamberger), relating to damages.
- Dean Foods, Kraft Foods, Ralston Purina Company, Nabisco, Inc. and McKee Foods v.
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- <u>Vitamin Antitrust Litigation</u>, MDL No. 1285, United States District Court for the District of Columbia. Expert Report on behalf of opt-out plaintiffs, May 2002 (with William M. Landes and Gustavo Bamberger), relating to damages.
- Dean Foods, Kraft Foods, Ralston Purina Company, Nabisco, Inc. and McKee Foods v.
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- Joint Declaration to Federal Communications Commission, GN Docket No. 00-185, in the matter of <u>Inquiry Concerning High-Speed Access to Internet Over Cable and Other Facilities</u> (with K. Arrow, G. Becker, D. Carlton, R. Gertner, D. Fischel, J. Kalt, and G. Bamberger), May 2002, on behalf of Verizon.
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- Reply Declaration Re: <u>Joint Application of Northpoint Communications and Verizon</u>

 <u>Communications for Authority to Transfer Control of Blanket Authorization to</u>

 <u>Provide Domestic Interstate Telecommunications Services as a Non-Dominant</u>

 Carrier: Before the Federal Communications Commission, Washington DC, Docket

- No. 00-157, October 17, 2000 (with Dennis Carlton), on behalf of Verizon and Northpoint.
- <u>Vitamin Antitrust Litigation</u>, MDL No. 1285, United States District Court for the District of Columbia. Expert Report on behalf of opt-out plaintiffs, June 2000 (with William M. Landes), relating to discovery issues.
- Ex Parte Declaration to Federal Communications Commission, CC Docket No. 99-333, in the matter of <u>Joint Application of MCI WorldCom and Sprint for Consent to Transfer Control</u>, May 2000, on behalf of SBC.
- Gas City, Ltd. v. Indiana Department of Transportation, Circuit Court of St. Joseph County, Indiana. Affidavit on behalf of Gas City, March 2000.
- Declaration before the Federal Communications Commission, CC Docket No. 99-333, in the matter of <u>Joint Application of MCI WorldCom and Sprint for Consent to Transfer Control</u>, February 2000 (with Dennis Carlton), on behalf of SBC.
- Ex Parte Comments to Federal Communications Commission, CC Docket No. 99-272, in the matter of the Merger of Qwest Communication International Inc. and U S WEST, February 2000, on behalf of Qwest and U S WEST.
- Lemon, Myer, Duncan et al. v. International Union of Operating Engineers, et al., U.S. District Court for the Eastern District of Wisconsin, Case No. 97-C-0857. Affidavit on behalf of International Union of Operating Engineers (December 1999): deposition (January 2000); Supplemental Report (February 2000).
- Declaration before the Federal Communications Commission, CC Docket No. 99-272, in the matter of Merger of Qwest Communications International Inc. and U S WEST, Inc., October 18, 1999 (with Dennis Carlton), on behalf of Qwest and U S WEST.
- Ex Parte Report to the Federal Communications Commission, CC Docket No. 98-141 regarding the <u>Merger of SBC Communications Inc.</u> with Ameritech Corporation, April 1999 (with Dennis Carlton) on behalf of SBC and Ameritech.
- Riverside Pipeline Co., v. Panhandle Eastern Pipeline Co., United States District Court for the Western District of Missouri, Case No. 97-0642-CV-W-4, Expert Report in September 1998, on behalf of Panhandle Eastern Pipeline Co.
- Lemon, Myer, Duncan et. al. v. International Union of Operating Engineers, et al., United States District Court for the Eastern District of Wisconsin, Case No. 97-C-0857; Affidavit in September 1998, on behalf of International Union of Operating Engineers.
- Testimony before the Department of Public Service of the State of West Virginia in the Matter of Application of WorldCom, Inc., Corp., for Approval to Transfer Control of MCI Communication to WorldCom, Inc. (June 17, 1998); oral testimony (July 2, 1998), on behalf of WorldCom.

- Testimony before the Department of Public Service Regulation, Public Service Commission of the State of Montana, Docket No. D97.10.191, in the Matter of the <u>Application of WorldCom, Inc. and MCI Communications Corporation for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.</u>, May 12, 1998, on behalf of WorldCom.
- Testimony before the Public Utilities Commission of the State of Colorado, Docket No. 97A-494T, in re <u>Application of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.</u>, pre-filed direct testimony (March 25, 1998), cross-examination (April 2, 1998); on behalf of WorldCom.
- Affidavit before the Florida Public Service Commission, Docket No. 971375-TP, Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications

 Corporation to WorldCom, Inc., February 27, 1998 (with Dennis Carlton); on behalf of WorldCom.
- Affidavit before the New York State Public Service Commission, Case 97-C-1804, <u>Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications</u>

 <u>Corporation to WorldCom, Inc.</u>, February 16, 1998 (with Dennis Carlton); on behalf of WorldCom.
- Second Declaration before the Federal Communication Commission, CC Docket No. 97-211, in the Matter of <u>Application of WorldCom, Inc. and MCI Communications</u>

 <u>Corporation for Transfer of Control of MCI Communications Corporation to</u>

 <u>WorldCom, Inc.</u>, March 19, 1998 (with Dennis Carlton); on behalf of WorldCom and MCI.
- Shuller v. United States, U.S. District Court for the Eastern District of Pennsylvania, Civil Action No. 97-3820, Expert report in February, 1998; on behalf of U.S. Department of Justice.
- Declaration before the Federal Communication Commission, CC Docket No. 97-211, in the Matter of <u>Applications of WorldCom, Inc. and MCI Communications Corporation</u> for Transfer of Control of MCI Communications to WorldCom, Inc., January 25, 1998 (with Dennis Carlton); on behalf of WorldCom and MCI.
- Smith v. Amtrak, Circuit Court of Cook County, IL, Case 92 L 10525. Deposition in November 1997, trial testimony in January 1998; on behalf of Smith.
- Johnson and Lehl v. City Colleges of Chicago, U.S. District Court for the Northern District of Illinois Eastern Division Case No. 96 C 0862. Expert report in July 1997, deposition testimony in November 1997; on behalf of City Colleges of Chicago.
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- <u>Galvan v. U.S. Industries</u>, Expert Report on December 27, 1997, deposition testimony in January 1997; on behalf of U.S. Industries.
- Sprint Communications Company L.P. v. Network 2000 Communications Corporation, Expert report on July 15, 1996, deposition testimony in July, August 1996; affidavit on November 9, 1996; on behalf of Sprint.
- <u>Beazer East v. CSX Transportation, Inc.</u>, U.S. District Court for the Western District of Pennsylvania Case No. 93 0861, Expert report in April 1996; deposition testimony in June 1996; on behalf of CSX.
- Report submitted in May 1996 to the National Association of Insurance Commissions on behalf of National Association of Independent Insurers.
- <u>Carbon Dioxide Industry Litigation</u>, U.S. District Court for Central District of Florida MDL940. Expert report in October 1994 (with William M. Landes); supplemental report (with William M. Landes and Richard Leftwich) in May 1995; deposition testimony in July 1995; on behalf of opt-out plaintiffs.
- AVR, Inc. v. Cemstone Products Corp., U.S. District Court, District of Minnesota, Third Division, File CIV 3-92-551. Expert report in October 1994; supplemental affidavits in December 1994, January 1995; on behalf of Cemstone.
- W. Borysiewicz v. M. Gilblair, Circuit Court of Cook County, Illinois. Deposition testimony in August 1994; trial testimony in September 1994; on behalf of Borysiewicz.
- NAACP et. al. v. American Family Mutual Insurance Co., U.S. District Court, Eastern District of Wisconsin, Civil Action No. 90-C-0759. Deposition testimony in July 1994 and November 1994; on behalf of American Family.
- G. Bowan v. The Sales Force Companies, U.S. District Court for The Western District of Missouri, Case No. 92-0496-CV-W-2. Affidavit in February 1993; on behalf of Sales Force.
- <u>Wisconsin Central Transportation Corporation -- Continuance in Control -- Fox Valley and</u>

 <u>Western Ltd., Finance Docket 32036</u>. Verified Statement to the Interstate

 Commerce Commission in September 1992 (with Andrew M. Rosenfield); on behalf of the Wisconsin Central.
- <u>Castaneda v. Baron Wire and Steel Inc.</u>, Circuit Court of Cook County, Illinois, Municipal Department, Second District. Deposition testimony in February 1992; on behalf of Castaneda.
- Morgan v. ServiceMaster, U.S. District Court for the Northern District of Illinois, Case No. 89-C-0581. Report in August 1991 (with Sherwin Rosen); on behalf of ServiceMaster.

- Sepich v. Mueller, U.S. District Court for the Central District of Illinois, U.S. District Court,Case No. 88-2353. Report in March 1991 (with Sherwin Rosen); on behalf of Mueller.
- N. Savakis v. Beatrice Company, U.S. District Court for the N.E. District of Illinois Eastern Division, No. 89 C5790. Deposition testimony in June 1990; on behalf of Beatrice.
- <u>Times Herald Printing Company v. A.H. Belo Corp. and Dallas Morning News Company</u>,

 District Court of Harris County Texas, 280th Judicial District. Deposition testimony in April 1990; on behalf of Dallas Morning News.
- <u>Turner v. IDS Financial Services, Inc.</u>, U.S. District Court for the District of Minnesota, File No. 88-521. Report in November 1989; on behalf of IDS.
- McLendon et al. v. Continental Group et. al, U.S. District Court for the District of New Jersey, Civil Action No. 83-1340 (SA). Trial testimony in February 1989, testimony before Special Master in February 1990; testimony before Special Master (with Sherwin Rosen) in August 1990; on behalf of Continental Group.
- <u>Application of Illini Carrier L.P. before Illinois Commerce Commission</u>. Testimony in April 1988 regarding application to provide natural gas transportation services; on behalf of Illini Carrier.